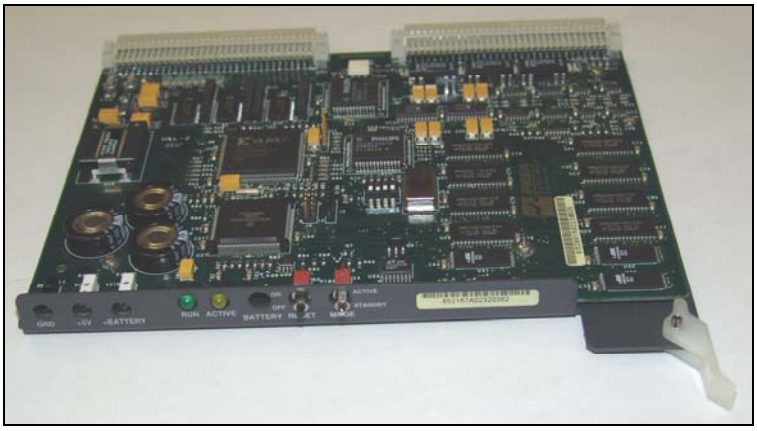
QuStream
PESA FORTELDTV

PRELIMINARY
Technical Manual

PERC2000
SYSTEM CONTROLLER
SOFTWARE OPERATION



Cheetah Advanced Technology Systems

Chapter 1 – PERC2000 Operating Software

1.1 INTRODUCTION

All control aspects of the PERC2000 (P2K) system are executed through the software application. Tools and routines provided allow the user to build and upload controller configuration files, perform system status polling and also perform certain maintenance and diagnostics routines.

Designing and configuring a routing switcher system requires a thorough working knowledge of the hardware components and the operational modes and functions available to the user. This discussion of the P2K software application assumes the user has the knowledge of switching functions and terminologies required to configure a system using the various commands and screens introduced in the following paragraphs. The user will need clear understanding of the concepts of switching levels, components, a reentry path, tie-lines, salvos, hardware strobes, etc. in order to make use of the following discussions.

Be aware that system changes you can make through the commands and screens discussed in the following paragraphs configure virtually all operational aspects of the system. Mistakes or erroneous entries made in many of the following programming steps can cause serious problems ranging from incorrect sources being switched to total shutdown of the entire system. Be sure you know exactly what you want to do before you make changes to the system configuration.

1.2 NAVIGATING THE PERC2000 SYSTEM SCREEN

When the P2K software program is started the System Parameters Screen, Figure 1-1, appears on the host PC display device. Note from the figure that the screen is displayed in a familiar Windows format, divided into five major functional areas: Menu Bar, Tool Bar, Status Bar, Command Tree Window and Main Display Screen.

The Menu Bar, Tool Bar and Status Bar all function in a similar manner to other Windows® based software applications. Some of the pull-down menus in the menu bar contain application specific commands and these will be discussed in detail where appropriate in the operating guide paragraphs.

All commands for system configuration, monitoring and diagnostics are contained in the command tree located on the left side of the screen in the Command Tree Window. Notice there are three top-level (parent) command headers: Configuration, Status and Maintenance/Diagnostics. As in most Windows® applications each parent header may be expanded to reveal sub-headers and commands by clicking the + box next to the item.

When a command is selected from the command tree, the data entry or status screen associated with the command appears in the Main Display Screen window.

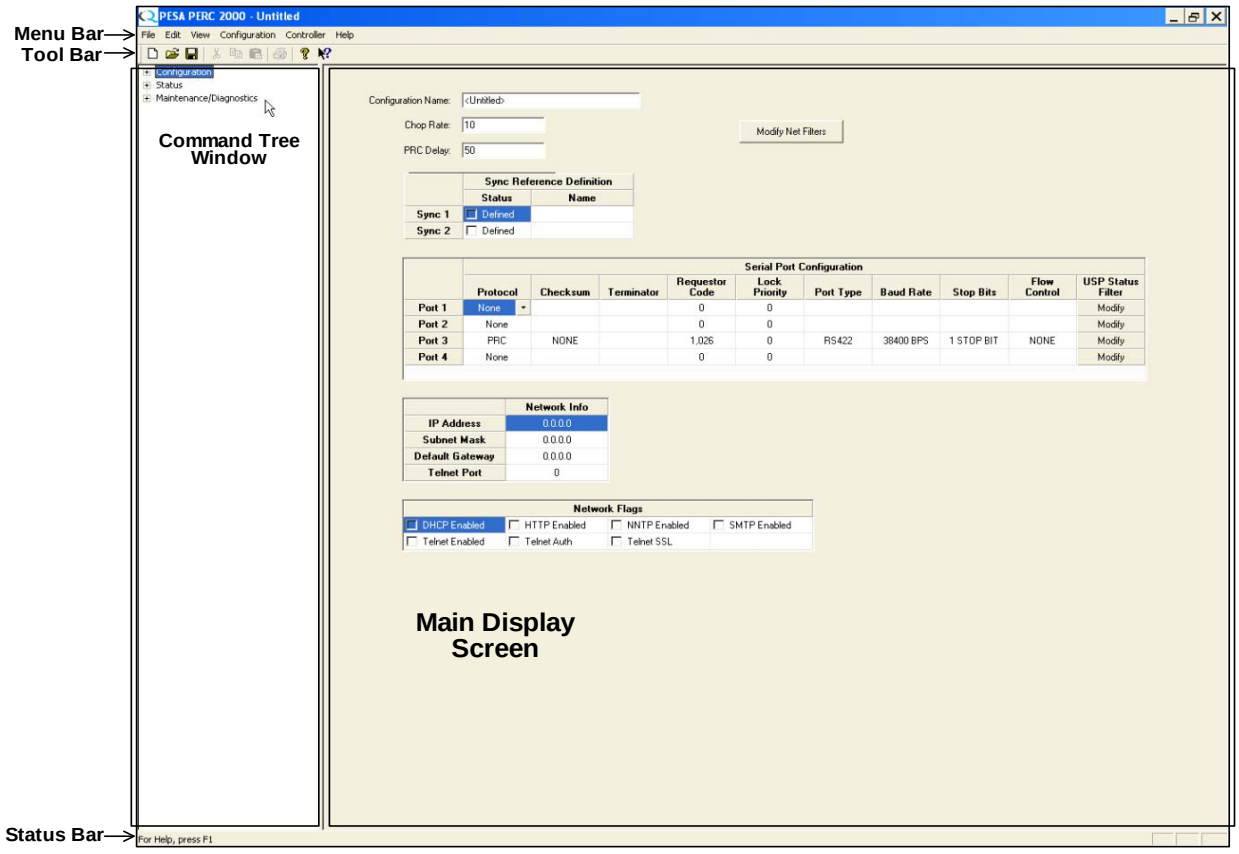


Figure 1-1 PERC2000 System Parameters Screen

1.3 COMMON RIGHT MOUSE CLICK FUNCTIONS

As with most other Windows based applications, certain functions for various command or data entry operations are accessed by clicking the right mouse button and selecting the desired operation. Functions and commands presented on the right click menu vary greatly between screens and data entry cells or fields. The example shown by Figure 1-2 illustrates a typical menu for data entry editing and short-cut functions. Not all commands shown below will appear on every right-click menu.

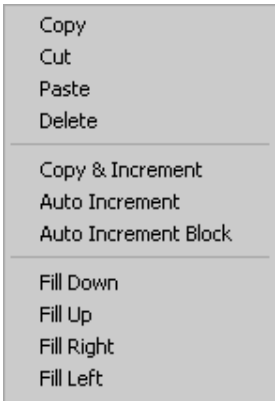


Figure 1-2 Typical Right-Click Mouse Commands

1.3.1 COPY, CUT, PASTE, DELETE

The Copy, Cut, Paste and Delete Commands in P2K function exactly as the Standard Windows® functions.

1.3.2 QUICK DATA ENTRY TOOLS

For many fields that require you to enter repetitive information, such as Inputs, Outputs, etc., there are additional commands available from the right mouse click menu. These commands vary depending on the system screen you are working with:

Fill-Down

Fill-Down fills in the fields below a selected field with the selected number. First, select the field with the number you want to duplicate and then, select the fields below it. Right-click and select **Fill-Down** to fill in the fields with the selected number, Figure 1-3.

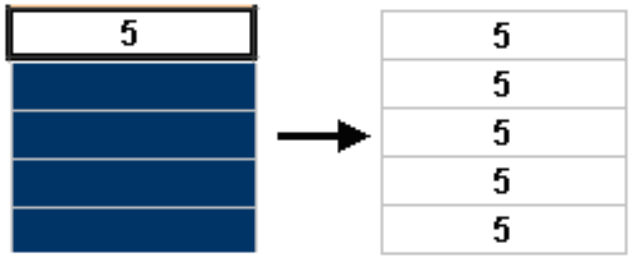


Figure 1-3 Fill-Down Command

Fill-Up

Fill-Up fills in fields above a selected field with the same information. First, select the field with the number you want to duplicate and then, select the fields above it. Right-click and select **Fill-Up** to fill in the fields with the selected information, Figure 1-4.

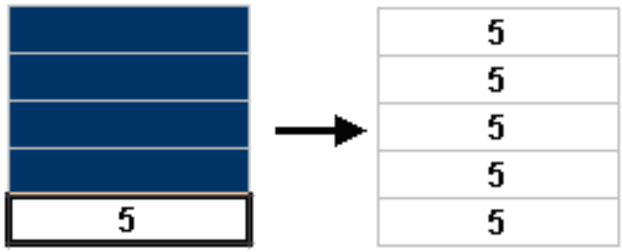


Figure 1-4 Fill-Up Command

Fill-Right

Fill-Right fills in the fields to the right of a selected field with the selected number(s). First, select the fields with the numbers you want to duplicate and then, select the fields to the right. Right-click and select **Fill-Right** to fill in the fields with the selected numbers. You can select either one field or several fields with this function, Figure 1-5.

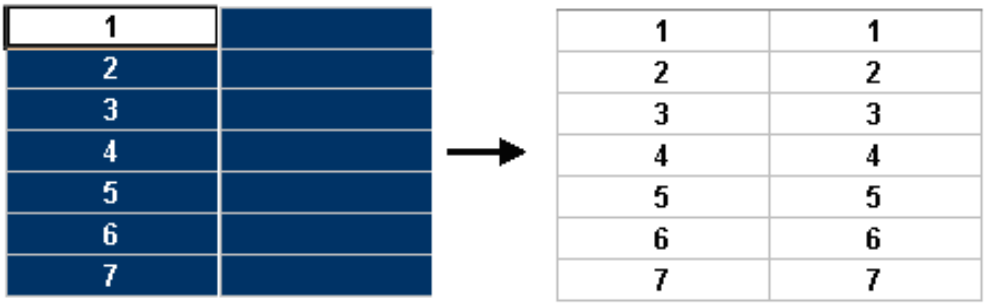


Figure 1-5 Fill-Right

Fill-Left

Fill-Left fills in the fields to the left of a selected field with the selected number(s). First, select the fields with the numbers you want to duplicate and then, select the fields to the left. Right-click and select **Fill-Left** to fill in the fields with the selected numbers. You can select either one field or several fields with this function, Figure 1-6.

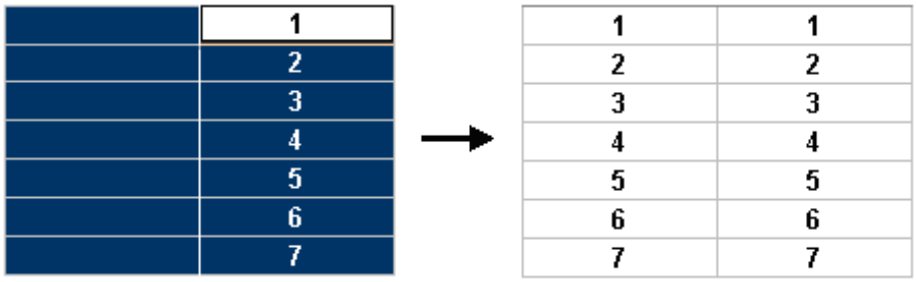


Figure 1-6: Fill-Left

1.4 GETTING STARTED

Remember that a configuration file must be downloaded to program the controller card for a particular system application. Configuration files are generated, using the sub-header commands under the Configuration parent directory in the command tree window. Once a configuration file is written, it may be saved for future use or downloaded to the controller hardware.

It is not necessary to have an active connection between the host computer and the P2K hardware to generate and save a configuration file. But in order to download a configuration, upload the current configuration file from the controller or to perform any status monitoring or maintenance/diagnostics procedures the host PC and System Controller hardware must have a viable Ethernet communication link.

Before proceeding, ensure that the P2K operating software is properly installed on the host PC. Launch the software from the Windows® Start Button or the desktop icon. Once the program executes, the screen shown in Figure 1-1 should be on the PC display.

1.5 CONFIGURATION FILES

Carefully plan your system or particular application before building a configuration file. Once a file is generated, use the **"Download to Controller"** command in the File menu to download the file to the hardware. It is also possible to read the current configuration file in the controller so that you can edit or save the file, as desired. Use the **"Upload from Controller"** command (File menu) to upload the current file.

Each configuration file will be different to satisfy a specific system requirement. However, the following are some basic steps that are common to building each configuration file.

1. Assign System Operating Parameters to configure serial port and Ethernet network properties.

2. Set up Levels and Components for the application.

3. Define and assign Sources and Destinations for each level that correspond to external equipment connected to the router.

4. Define special application functions such as Reentries or Tie-Lines, Source-to-Destination Blocks and Salvo Groups.

5. Define and assign lists of Levels, Salvos, Sources and Destinations available to various control panels.

6. Configure system Remote Control Panels and define specific application functions to configurable control panel keys.

1.6 CONFIGURATION COMMANDS

Commands and screens contained under the **Configuration** parent header in the Command Tree Window allow you to create a configuration file that can be saved or downloaded to the P2K Controller Card. Figure 1-7 lists the command headers contained under the Configuration parent. Each command is discussed in the following paragraphs.

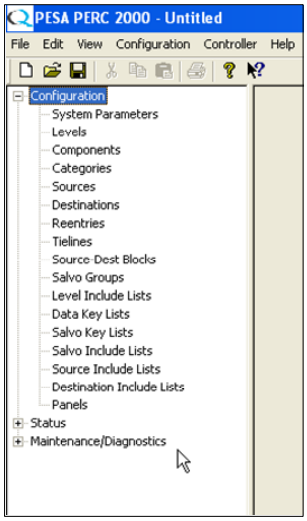


Figure 1-7 Configuration Tree Commands

1.6.1 SYSTEM PARAMETERS

The System Parameters Screen, Figure 1-8, is the top-level default screen of the Configuration Command Tree.

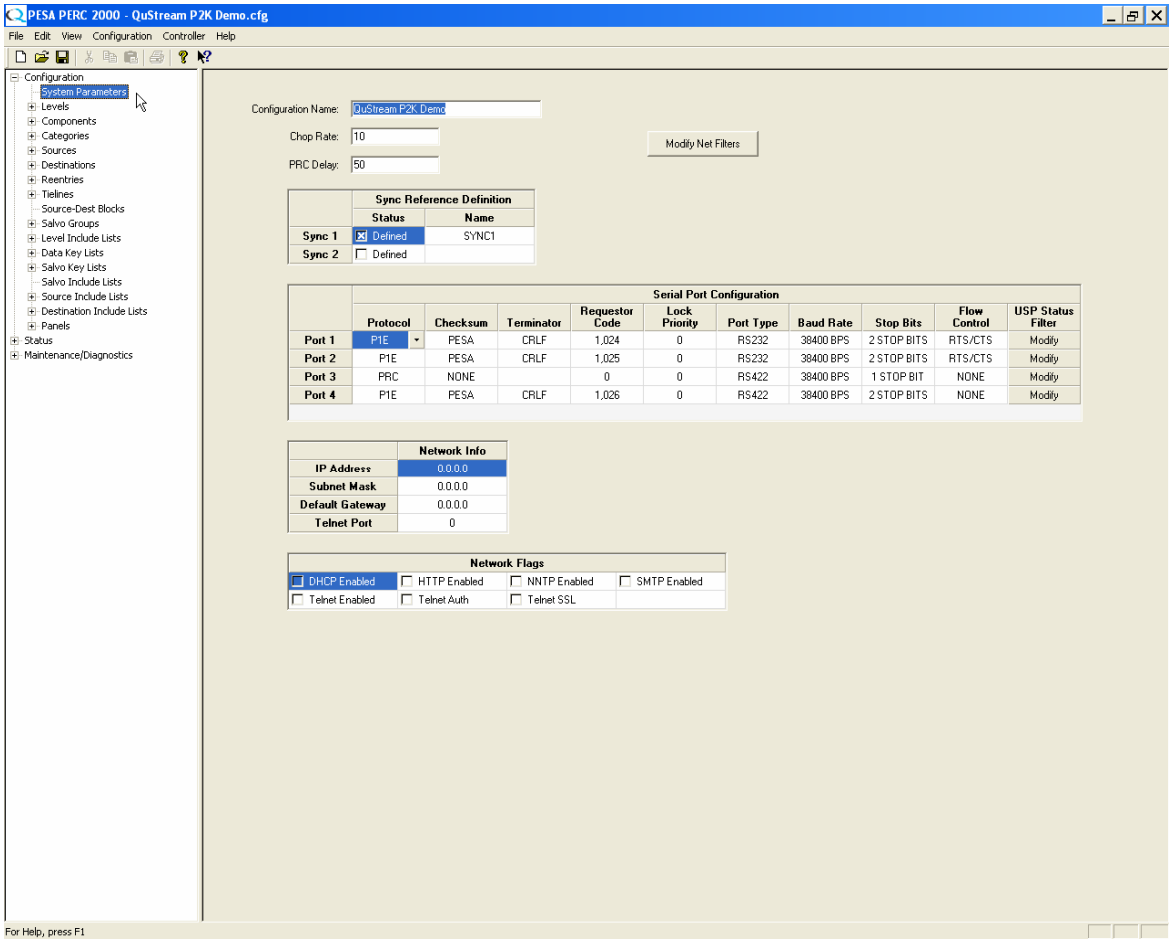


Figure 1-8 System Parameters Screen

From the System Parameters Screen, the user configures the serial ports and other operational parameters of the configuration file. Each area of the System Parameters screen is introduced in the following paragraphs:

1.6.1.1 Configuration Name

This field allows you to name the configuration file. Type the desired name in the Configuration Name box. Configuration names may have up to 32 alphanumeric characters. You can query this name from the P2K System Controller.

NOTE	**The Configuration Name may be different from the File Name.**

1.6.1.2 Chop Rate

Chop Rate indicates the frame rate of switches used by the Chop mode of operation. To change the chop rate, enter the desired value in the Chop Rate box. Any desired Chop Rate between 1 and 255 frames is supported by the P2K Control System. Default value of this parameter is 10 frames.

1.6.1.3 PRC Delay

This option specifies the delay between data messages sent over the PESA proprietary PRC bus. It applies to PRC, TGR, and XTN types of components. PRC delay values can range from 50 to 100 ms; the default value is 50 ms.

1.6.1.4 Modify Net Filters Button

Functions contained on the Modify Net Filters Button are not used in the current configuration of the P2K and no data entry is required. This functional area is reserved for future use.

1.6.1.5 Serial Port Configuration

The Serial Port Configuration portion of the System Parameters Window, Figure 1-8, allows you to configure the four serial ports on the P2K System Controller. The entry in the left-most column of the configuration table identifies the port (1 thru 4) defined by the entries in the associated row.

Refer to the following sections for information about the items in each field of the window.

Protocol

This entry identifies the protocol, defining the format used when sending data through the serial ports on the P2K System Controller. Enter the desired data protocol from the pull-down menu associated with the table cell. There are currently three protocols available for use:

- CPU Link Protocol 1 with Extensions (P1E) (81-9062-0407-0)
- Unsolicited Status Protocol (USP) (81-9062-0409-0)
- PESA Routing Control (PRC) (81-9062-XXXX-0)

The number in parenthesis identifies the PESA document that describes the data protocol.

NOTE	**Note that the selection box associated with Port 3 lists four available serial data protocols. Current revision of the P2K GUI Software has Port 3 fixed as a PRC Port, the other three options are reserved for future P2K implementations.**

NOTE	**Note that a fourth protocol option is listed in the selection box pull-down list, labeled P2-Serial. This protocol is not used in the current revision of the P2K GUI Software, and is reserved for future P2K implementations. .**

Checksum

A checksum determines how the validity of transmitted data is confirmed. There are three available checksum types:

- **NONE -** No validity checking.
- **PESA -** Data validity is checked using PESA's standard method. (See Protocol documentation.)
- **HEX ASCII -** Data validity is checked using a standard HEX-ASCII checksum.

Terminator

Terminator identifies the character(s) used to denote the end of a data packet or command string. Three terminators are available:

- **CR -** A carriage return.
- **LF -** A line feed.
- **CRLF -** A carriage return followed by a line feed.

Requestor Code

A Requester Code is used in conjunction with Lock Priority to determine if a lock or protect function can be removed. When a lock or protect has been assigned by a port (or panel), it can only be removed by another port (or panel) with a higher lock priority or with the same lock priority and same requester code.

Requester codes not explicitly defined automatically default to 1024, 1025, and 1026 for Ports 1, 2, and 4 respectively.

The acceptable range of requester codes is 1 - 65535.

Lock Priority

Lock Priority is used in conjunction with Requester Code to determine if a lock or protect function can be removed. When a lock or protect has been assigned by a port or panel, it can only be removed by another port or panel with a higher lock priority, or with the same lock priority and same requester code. The lower the lock priority number, the higher the priority.

Port lock priorities not explicitly defined automatically default to "0" which gives absolute authority to clear any lock or protect on the system. The acceptable range of lock priorities is 0-255 ("0" is Highest Priority).

Port Type

This pull down menu allows the user to assign operational protocol to the bus being configured. The menu allows the user to designate each bus as compliant to RS-422 or RS-232 standards.

Baud Rate

Baud rate is the data transfer rate through the serial port measured in Baud (bits per second). A baud rate of either 9600 or 38400 may be assigned to any of the serial buses.

Stop Bits

In asynchronous communications, a stop bit indicates that a byte of data has just been transmitted. Every byte of data is preceded by a start bit and followed by a stop bit.

Either 1 or 2 stop bits may be selected for each of the serial ports.

Flow Control

- RTS/CTS
- XON/XOFF
- NONE

USP Status Filter

The USP Status Filter determines which events are reported when a port is defined as a USP Port. Figure 1-9 illustrates the Status Filter Selection Screen and identifies the events that may be selected for reporting. To activate an event, click in the box beside the desired entry. A check will appear in the box to indicate the item is selected.

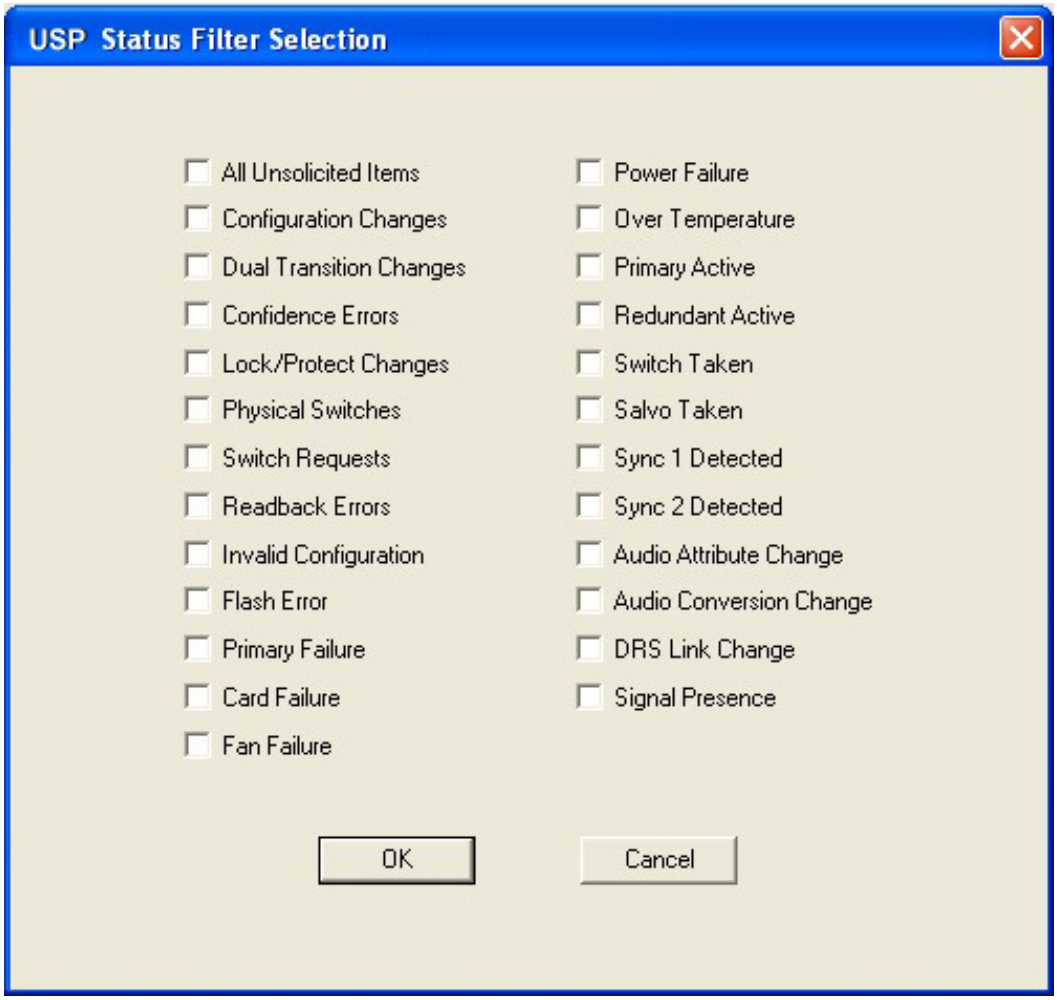


Figure 1-9 Status Filter Selection Screen

1.6.1.6 Network Info

Network Info entries are not used in the current configuration of the P2K and no data entry is required. This functional area is reserved for future use.

1.6.1.7 Network Flags

Data in the Network Flags area is not used in the current configuration of the P2K and no data entry is required. This functional area is reserved for future use.

1.6.2 LEVELS CONFIGURATION

A level is a group of related components that are switched together by the P2K Controller. Levels are the lowest element that the user can manipulate in the control system. The maximum number of levels in a configuration is 16. The example shown in Figure 1-10 is a 2x2 RGB video level named VID, which is made up of three components named RED, GRN and BLU.

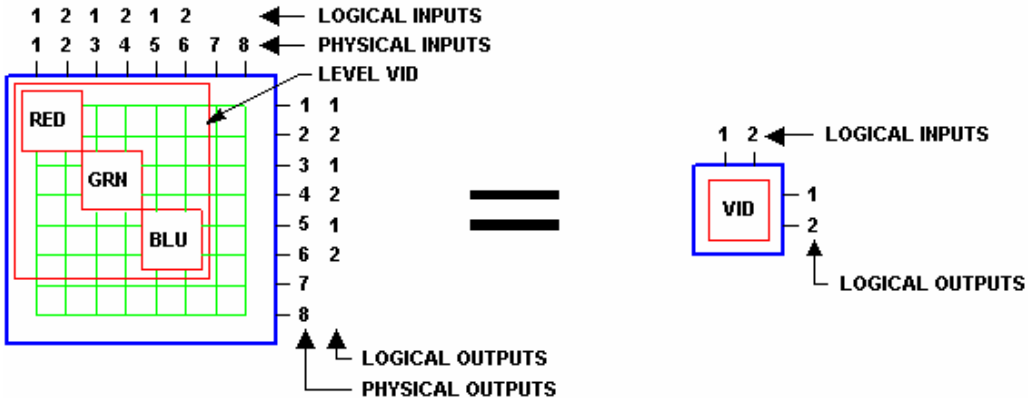


Figure 1-10: 2x2 RGB Video Level

When the **Levels** Command is selected, the Levels Configuration Screen, Figure 1-11, is displayed. From this screen the user can assign and enter operational parameters for various system levels. Each area of the Levels Configuration screen is introduced in the following paragraphs and shown in Figure 1-12:

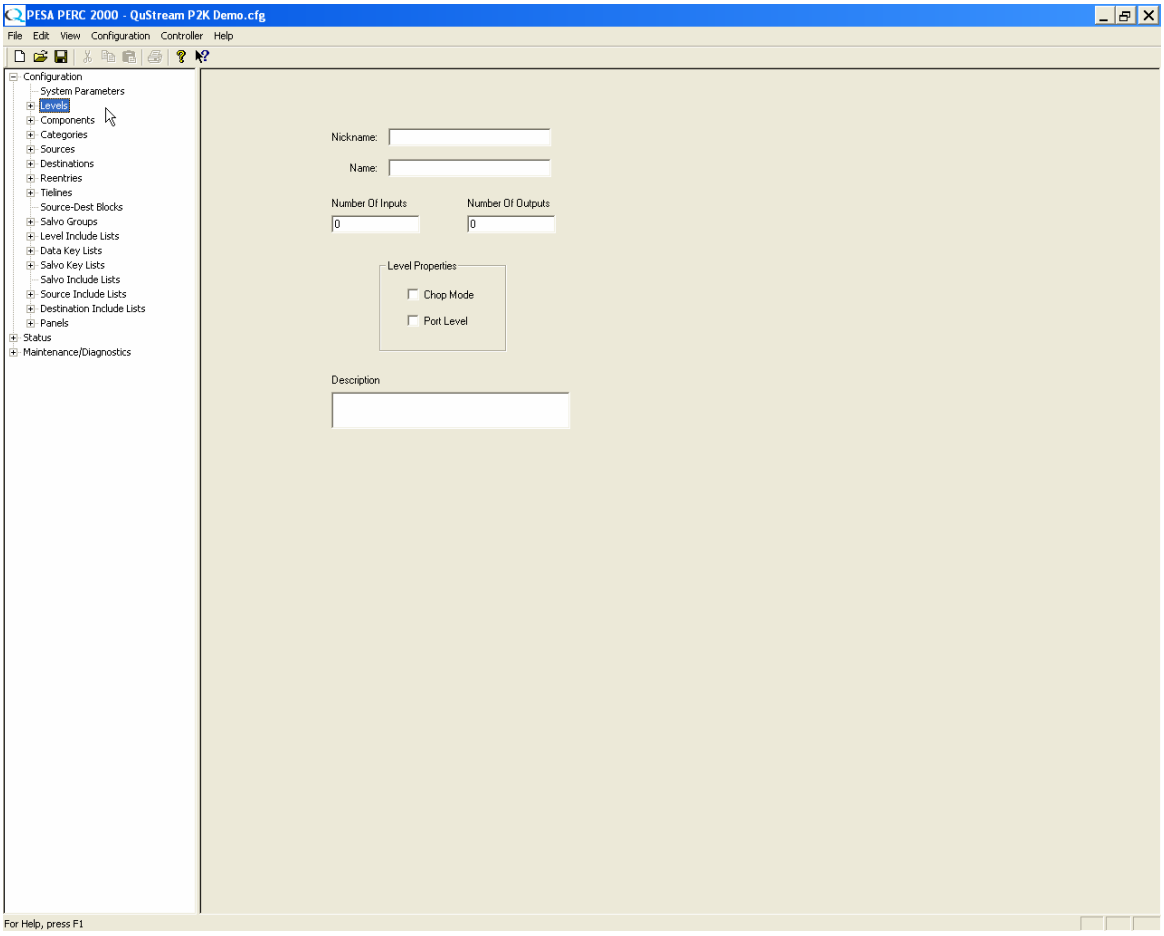


Figure 1-11: Levels Configuration Screen

1.6.2.1 Nickname and Name

Nickname – The assigned Nickname is a label (up to 8 characters) associated with the level and is the character string displayed on status display screens and system remote control panels (with display capability) for the defined switching level. The nickname text is also the character string displayed in the Levels sub-menu branch of the menu tree. In order to assign the level a nickname, click the cursor in the Nickname field and enter the nickname label text.

Once nickname text is assigned to a level note that the nickname character string is displayed as a sub-entry below the Levels Menu header. Any time you wish to return to the set-up screen for a particular level, simply click on the nickname sub-entry under Levels associated with the desired level.

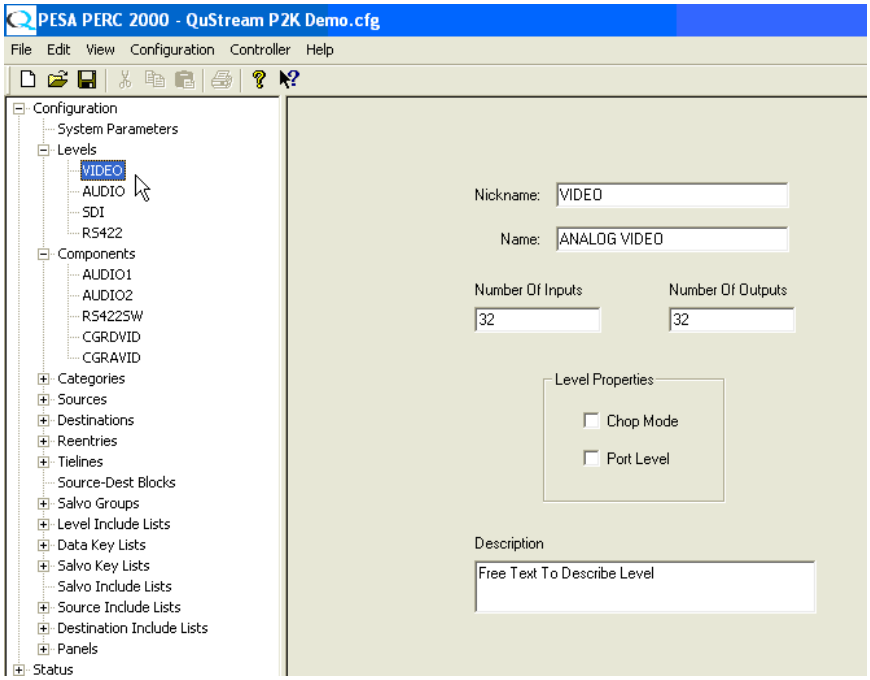


Figure 1-12 Levels Configuration Fields

Name - The Name field allows a longer and more descriptive name for the level. Generally, this field is used to assign a name to the level that more accurately describes its function.

For example, assume you are defining the level illustrated by the 2X2 RGB Video Level in Figure 1-10. You might assign the level the NAME "RGB Video" and assign the NICKNAME "RGB" or "RGB VID." Generally, when assigning names and nicknames, the NAME field is a longer more precise description of the defined level and the NICKNAME field is a shortened acronym or pneumonic used to identify the level on display devices or screens.

1.6.2.2 Number of Inputs and Outputs

Number of Inputs – Enter the number of input sources associated with the defined level.

Number of Outputs – Enter the number of output signals associated with the defined level.

1.6.2.3 Level Properties

Chop Mode - When this box is checked it indicates the level is "chop enabled" and may be included in a chop function.

Port Level – This function not used in current version of P2K Software.

1.6.2.4 Description

Description is a free text field where you can enter a full description of the switching level or add notes or information as desired. This field is solely for discretionary use and has no effect on the defined level characteristics.

1.6.2.5 Adding or Deleting Levels

Adding a Level - P2K allows a maximum of 16 switching levels. To add a level, simply click on the Levels parent header to access a blank levels set-up screen. You may also right click the mouse with the cursor on the Levels parent header or any sub-header, select the "Add Level" option, Figure 1-13, from the click box and a blank levels set-up screen is displayed.

Deleting a Level - To delete a level, expand the Levels parent header to display the list of assigned levels. Click on the name of the level you wish to delete, right click the mouse and select the "Delete Level" option from the click box, Figure 1-13.

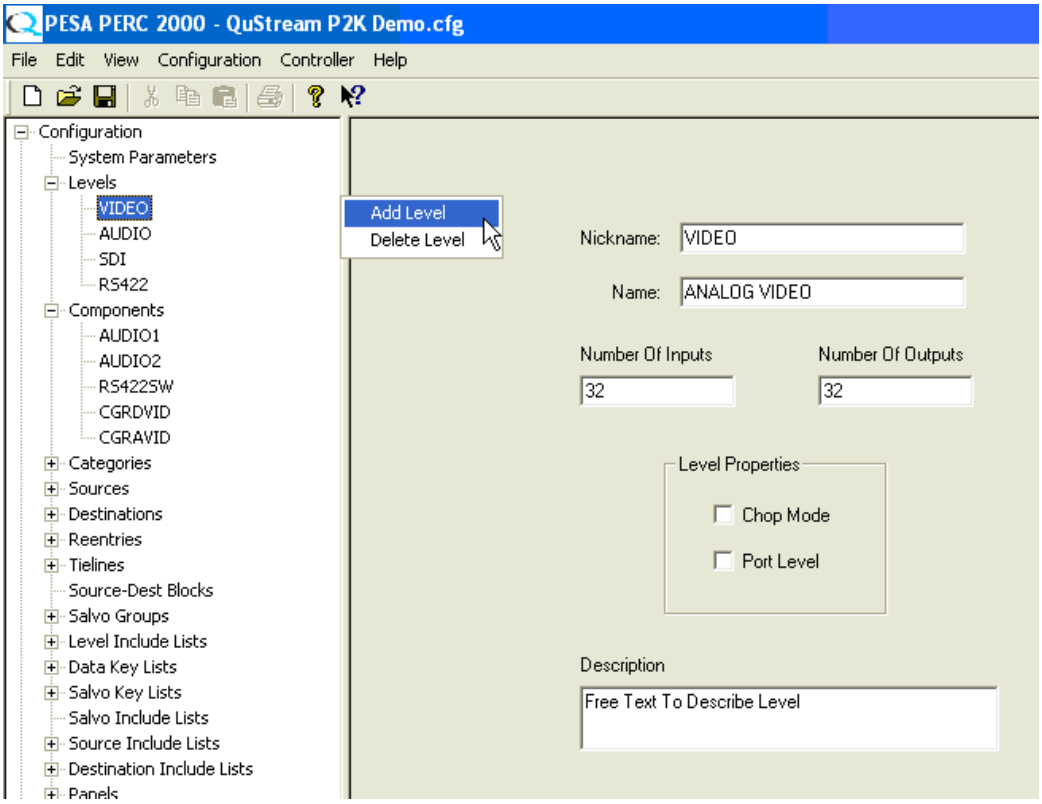


Figure 1-13 Right Mouse Click Options

1.6.3 COMPONENTS CONFIGURATION

A component is the most basic signal element that can be switched by a system controller. Components map level inputs/outputs of the actual physical matrix and are collected under a level name that can be controlled by users. For example, in RGB video signals of "Red", "Green", and "Blue" may be the components; in stereo audio, "Left" and "Right" audio signals may be the components. The example shown in Figure 1-14 is a 2x2 RGB video level named VID, which is made up of three components named RED, GRN and BLU. The maximum number of components in a configuration is 64.

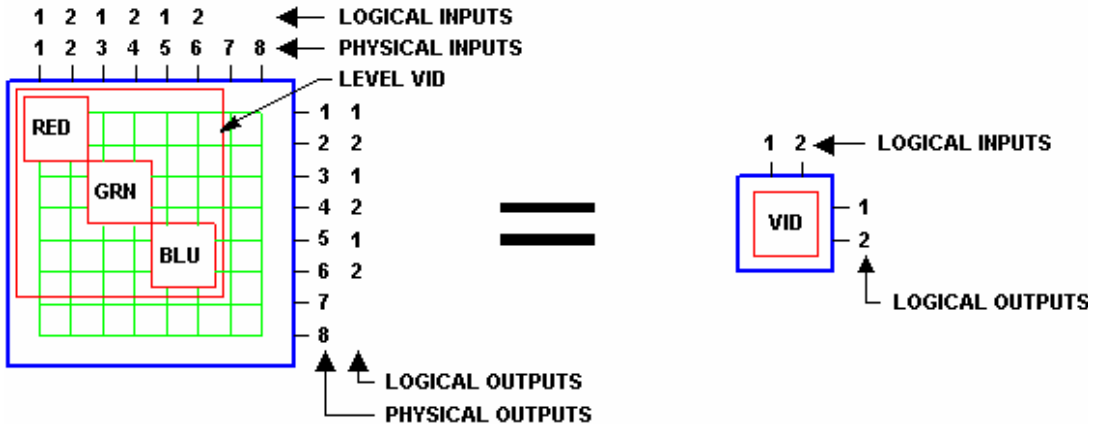


Figure 1-14: Components of 2x2 RGB Video Level

When the **Components** Command is selected, the Components Configuration Screen, Figure 1-15, is displayed. From this screen the user can assign and enter operational parameters for various system components. Each area of the Components Configuration screen is introduced in the following paragraphs and shown in Figure 1-16.

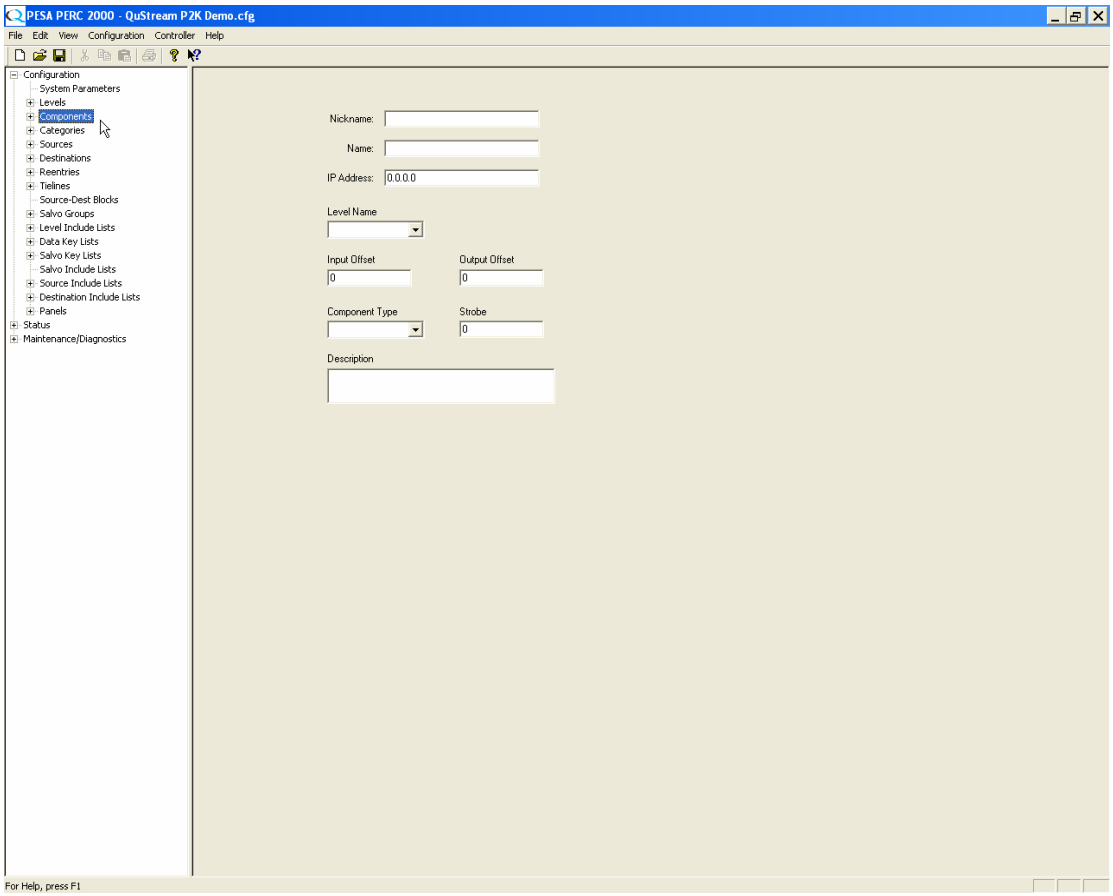


Figure 1-15 Components Configuration Screen

1.6.3.1 Nickname and Name

Nickname – The assigned Nickname is a label (up to 8 characters) associated with the component and is the character string displayed in the Components sub-menu branch of the menu tree. In order to assign the component a nickname, click the cursor in the Nickname field and enter the nickname label text.

Once nickname text is assigned to a component note that the nickname character string is displayed as a sub-entry below the Components Menu header. Any time you wish to return to the set-up screen for a particular component, simply click on the nickname sub-entry under Components associated with the desired component.

Name - The Name field is where a longer, more descriptive name is defined for the component. Generally, when assigning names and nicknames, the NAME field is a more precise description of the defined component and the NICKNAME field is a shortened acronym or pneumonic.

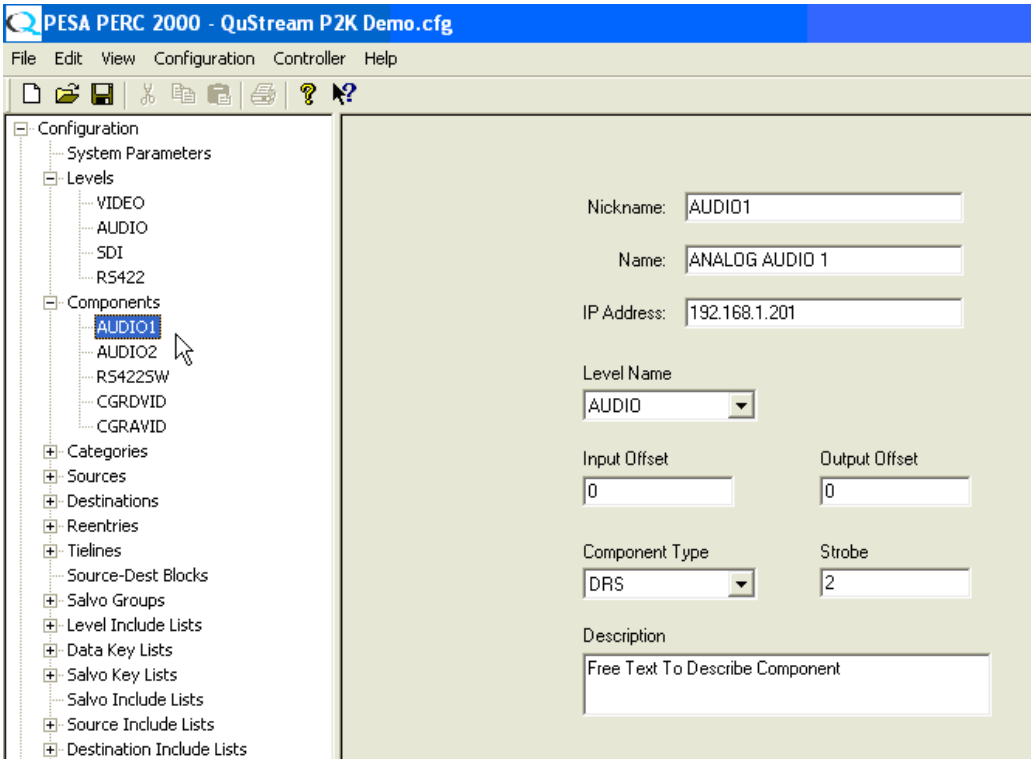


Figure 1-16 Components Configuration Fields

1.6.3.2 IP Address

Enter the IP address, if applicable, of the switcher frame in which the component sources reside.

1.6.3.3 Level Name

Level Name is a pull-down menu list containing the nickname of the levels defined for the system. Highlight and select the level name from the list to which the component being defined is a subset. You must have already created the level you want to use before you can select the name in this field.

1.6.3.4 Input and Output Offset

Difference between the physical input or output number and the level input or output number for a given source or destination.

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1.6.3.5 Component Type

Component Type is a pull-down menu list containing acronyms defining the types of hardware devices controlled by the P2K controller from the following options:

PRC – Describes any PESA switching product using the PESA Routing Control (PRC) bus for control interface. Examples of PRC devices include, but are not limited to, Cheetah Series Video Matrix Switchers and Jaguar products.

TGR – Describes the PESA Tiger Series of switching products.

XTN – Describes and External Control Bus to interface with non-PESA equipment.

P2 –

DRS – Describes the Cheetah DRS Series of audio routing products.

Highlight and select the proper hardware designator corresponding to the type of hardware routing the component.

1.6.3.6 Strobe

Strobe defines a numeric digit identifying the physical hardware routing the component.

1.6.3.7 Description

Description is a free text field where you can enter a full description of the switching component or add notes or information as desired. This field is solely for discretionary use and has no effect on the defined component characteristics.

1.6.3.8 Adding or Deleting Components

Adding a Component - P2K allows a maximum of 64 components. To add a component, simply click on the Components parent header to access a blank Components Configuration Screen. You may also right click the mouse with the cursor over the Components parent header, or any sub-header, select the "Add Component" option from the click box, Figure 1-17, and a blank Components Configuration Screen is displayed.

Deleting a Component - To delete a component, expand the Components parent header to display the list of assigned components. Click on the name of the component you wish to delete, right click the mouse and select the "Delete Component" option from the click box, Figure 1-17.

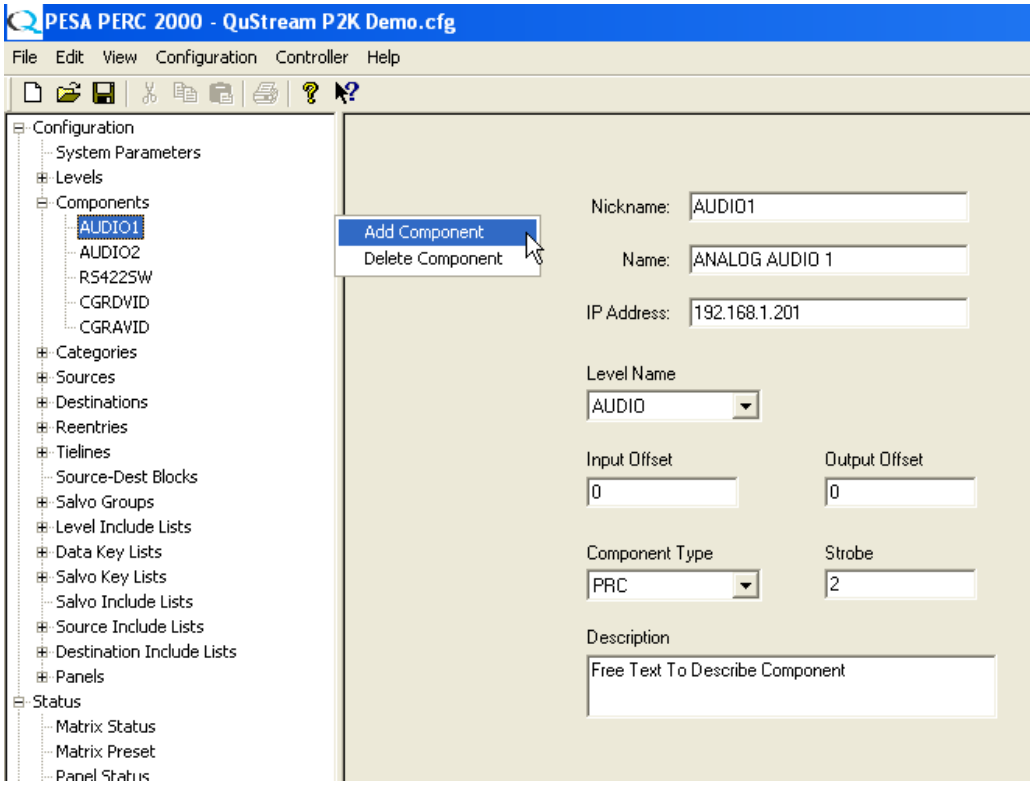


Figure 1-17 Right Mouse Click Options

1.6.4 CATEGORIES

Categories are alphanumeric strings (up to 8 characters) used as labels when indexing sources and destinations from a remote control panel. Any combination of letters and numbers may be used as a category label. Generally, labels used as categories are elements of a name which can be paired to specify a certain source or destination. For example the screen shot shown in Figure 1-18 lists the digits 0 thru 9 and the words INPUT and OUTPUT as categories. To call the source named Input 5 when indexing from a panel the user would scroll through the categories to the word INPUT as the first character and then scroll to the digit 5 for the second character.

Categories are entered from the **Categories** Configuration Screen, Figure 1-19. Up to 1024 categories are allowed in a configuration file.

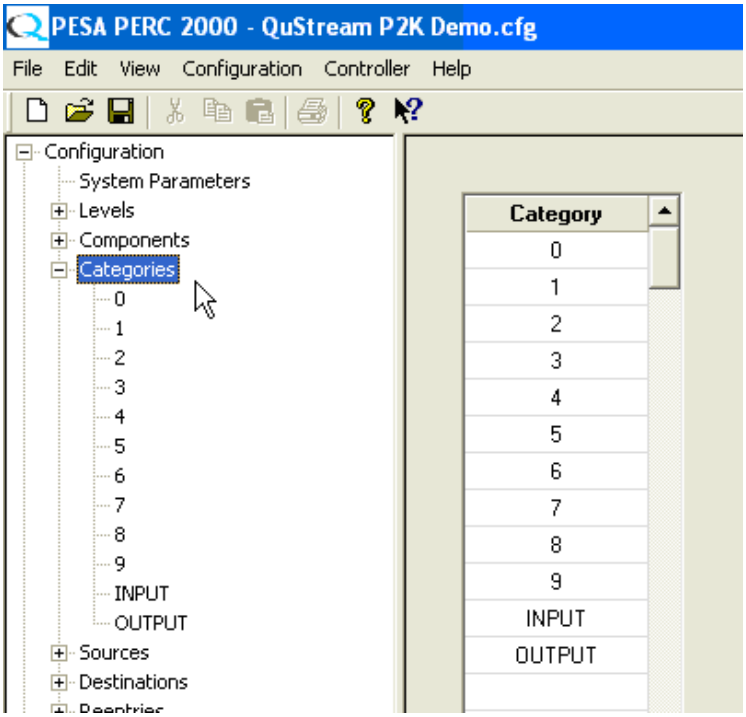


Figure 1-18 Categories Configuration Screen

Adding a Category

To add a category label, click on the Categories parent command item to bring up the categories set-up screen. Move the cursor to a blank cell in the categories list box, click in the cell and enter the character string for the category label you wish to enter. You may also right click the mouse with the cursor over the Categories command item, select the "Add Category" option from the click box to access the set-up screen, Figure 1-19.

Once category text is entered in a cell note that the character string is displayed as a sub-entry below the Categories Menu header. Any time you wish to quickly move to the cell for a particular category label, simply click on the text entry under the Categories command item. From the cell you may modify or delete the category entry.

Deleting a Category

To delete a category label, click on the Categories parent command item to bring up the categories set-up screen. Move the cursor to the cell in the categories list box, containing the character string you wish to delete. You may also quickly move to the cell for a particular category label by clicking on the text entry under the Categories command item. With the cursor in the cell, right click the mouse and select the "Delete Category" option from the click box, Figure 1-19, to delete the entry.

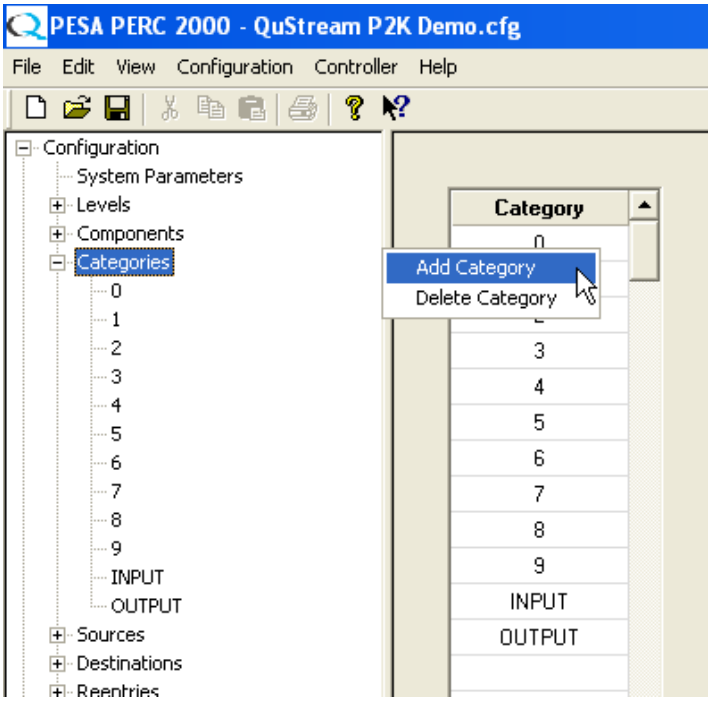
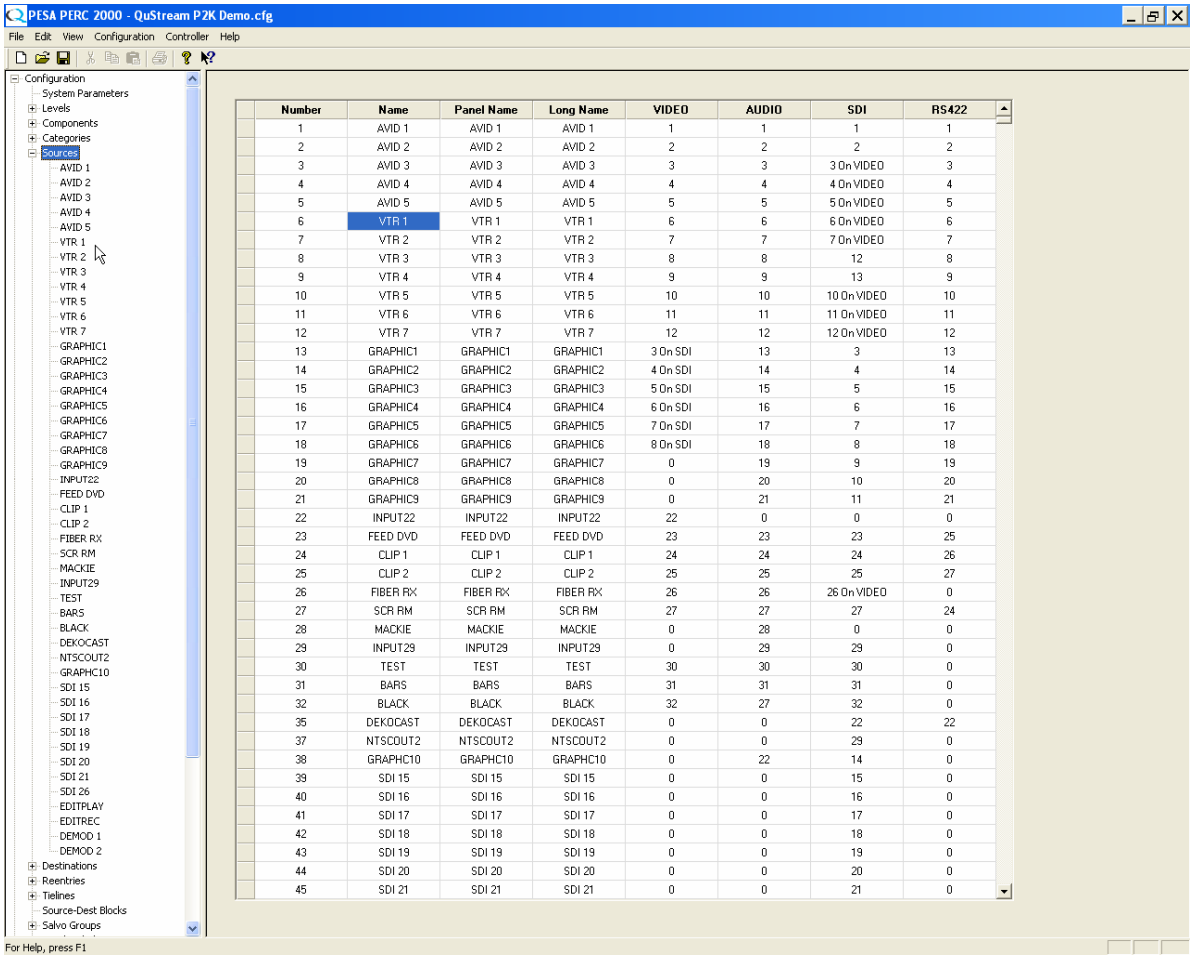


Figure 1-19 Right Mouse Click Options

1.6.5 SOURCES

Clicking the **Sources** header on the Configuration Command Tree accesses the Source Configuration Screen, Figure 1-20. This screen allows you to define all of the sources in the switcher configuration. From this screen each physical input to the system is assigned a name, a panel designator and linked to a physical input of a router frame. In router terminology, this screen essentially maps each physical source (input) to the router to its logical input in level and panel designator nomenclature.

Note the Sources Screen is in the form of a database spreadsheet with data entries for each source made on individual rows from left to right. Each area of the Sources set-up screen is introduced in the following paragraphs:



Number	Name	Panel Name	Long Name	VIDEO	AUDIO	SDI	RS422
1	AVID 1	AVID 1	AVID 1	1	1	1	1
2	AVID 2	AVID 2	AVID 2	2	2	2	2
3	AVID 3	AVID 3	AVID 3	3	3	3 On VIDEO	3
4	AVID 4	AVID 4	AVID 4	4	4	4 On VIDEO	4
5	AVID 5	AVID 5	AVID 5	5	5	5 On VIDEO	5
6	VTR 1	VTR 1	VTR 1	6	6	6 On VIDEO	6
7	VTR 2	VTR 2	VTR 2	7	7	7 On VIDEO	7
8	VTR 3	VTR 3	VTR 3	8	8	12	8
9	VTR 4	VTR 4	VTR 4	9	9	13	9
10	VTR 5	VTR 5	VTR 5	10	10	10 On VIDEO	10
11	VTR 6	VTR 6	VTR 6	11	11	11 On VIDEO	11
12	VTR 7	VTR 7	VTR 7	12	12	12 On VIDEO	12
13	GRAPHIC1	GRAPHIC1	GRAPHIC1	3 On SDI	13	3	13
14	GRAPHIC2	GRAPHIC2	GRAPHIC2	4 On SDI	14	4	14
15	GRAPHIC3	GRAPHIC3	GRAPHIC3	5 On SDI	15	5	15
16	GRAPHIC4	GRAPHIC4	GRAPHIC4	6 On SDI	16	6	16
17	GRAPHIC5	GRAPHIC5	GRAPHIC5	7 On SDI	17	7	17
18	GRAPHIC6	GRAPHIC6	GRAPHIC6	8 On SDI	18	8	18
19	GRAPHIC7	GRAPHIC7	GRAPHIC7	0	19	9	19
20	GRAPHIC8	GRAPHIC8	GRAPHIC8	0	20	10	20
21	GRAPHIC9	GRAPHIC9	GRAPHIC9	0	21	11	21
22	INPUT22	INPUT22	INPUT22	22	0	0	0
23	FEED DVD	FEED DVD	FEED DVD	23	23	23	25
24	CLIP 1	CLIP 1	CLIP 1	24	24	24	26
25	CLIP 2	CLIP 2	CLIP 2	25	25	25	27
26	FIBER RX	FIBER RX	FIBER RX	26	26	26 On VIDEO	0
27	SCR RM	SCR RM	SCR RM	27	27	27	24
28	MACKIE	MACKIE	MACKIE	0	28	0	0
29	INPUT29	INPUT29	INPUT29	0	29	29	0
30	TEST	TEST	TEST	30	30	30	0
31	BARS	BARS	BARS	31	31	31	0
32	BLACK	BLACK	BLACK	32	27	32	0
35	DEKOCAST	DEKOCAST	DEKOCAST	0	0	22	22
37	NTSCOUT2	NTSCOUT2	NTSCOUT2	0	0	29	0
38	GRAPHC10	GRAPHC10	GRAPHC10	0	22	14	0
39	SDI 15	SDI 15	SDI 15	0	0	15	0
40	SDI 16	SDI 16	SDI 16	0	0	16	0
41	SDI 17	SDI 17	SDI 17	0	0	17	0
42	SDI 18	SDI 18	SDI 18	0	0	18	0
43	SDI 19	SDI 19	SDI 19	0	0	19	0
44	SDI 20	SDI 20	SDI 20	0	0	20	0
45	SDI 21	SDI 21	SDI 21	0	0	21	0

Figure 1-20 Sources Configuration Screen

1.6.5.1 Number

The left-most column is labeled **NUMBER** and is numerically sequential and automatically filled in as sources are added. The user can not change the entry in the Number column.

1.6.5.2 Name, Panel Name and Long Name

The next three columns allow the user to assign identifying names and/or acronyms to each source according to the following formats:

Name – Any combination of up to 8 alphanumeric characters may be used to identify the source.

Panel Name - Any combination of up to 8 alphanumeric characters may be used to identify the source. The entry made in this column is the text string that will appear on system remote control panels with display capability.

Long Name – This column is essentially a free text space where the user may enter a name up to 32 characters in length for the source. This name is only displayed on this configuration screen and may be used to more clearly identify an external device or system.

1.6.5.3 Switching Levels

To the right side of the three name columns you will see columns corresponding to each assigned system switching level. The entry (in most cases a number) in the column corresponding to each source identifies and assigns the actual physical input to the switching device associated with the source.

For example, look at entry number 6 in Figure 1-20 labeled VTR 1. Assume this nomenclature is assigned to a VTR with analog video, stereo analog audio and time code outputs. The video is switched by the VIDEO level, the two audio outputs (left and right) are each components (AUDIO1 and AUDIO2, respectively) of the AUDIO level and the time code output is switched by the RS422 level. Assume further that each output signal type from the VTR (video, audio and time code) is physically switched through a separate switcher frame. For discussion purposes assume the video is switched through a Cheetah video matrix switcher, audio is routed through a Cheetah DRS frame and the time code signal is routed through a PESA Tiger switcher.

Notice on Figure 1-20 that the numeric entry for VTR 1 in both the VIDEO and RS422 level columns is a 6 for each level. This entry tells the P2K controller that the video signal from the hardware device identified as VTR 1 will be present at physical input number 6 of the switching matrix identified by the logical switching level named VIDEO and that the time code signal from VTR 1 will be present at physical input number 6 of the Tiger switcher defined by the logical level named RS422.

The numeric entry for VTR 1 in the column corresponding to the logical switching level named AUDIO is also a 6. Remember, however, that logical level AUDIO is composed of two components named AUDIO1 and AUDIO2 and that each audio signal is routed through separate routing circuitry. In this case, the numeric 6 entry indicates that the left channel output from VTR 1 is applied at physical input number 6 of the switching matrix identified as AUDIO 1 under the logical level named AUDIO and that the right channel output from VTR 1 is applied at physical input number 6 of the switching matrix identified as AUDIO 2 under the logical level named AUDIO. In matrix space, the controller treats logical level AUDIO as a single entity and switches both components simultaneously. These may be two separate routing frames or may be one frame with the matrix space configured as two or more separate routing units using input offset values to define the physical inputs to the switching matrix. This audio example conceptualizes, in a very basic application, several very powerful tools available through the P2K system. If you do not fully understand this example, you may refer to Chapter 1 of this manual for a tutorial on advanced switching system applications.

Note also that an entry appears under the logical level SDI column for VTR 1. This entry identifies and assigns a tie-line arrangement for the matrix identified by level VIDEO. Tie-lines are discussed in Paragraph 7.6.5.5.

Only one source per level is allowed. A level may be left undefined on a source. Inputs may be shared between different sources. The maximum number of sources is 2400.

1.6.5.4 Navigating the Sources Spreadsheet

The Sources Configuration Screen is accessed by clicking the Sources command entry under the Configuration Command tree. The entire Source Configuration spreadsheet is displayed for easy access. When the Sources tab is expanded, note that a listing of all assigned source identifiers appears below the parent command. Clicking any of the identifiers in the list will cause the spreadsheet cursor to immediately move to and highlight the configuration entry row associated with the source.

Right clicking either the Sources command tab or any source identifier entry below it, causes a click box as shown in Figure 1-21 to appear with the following options:

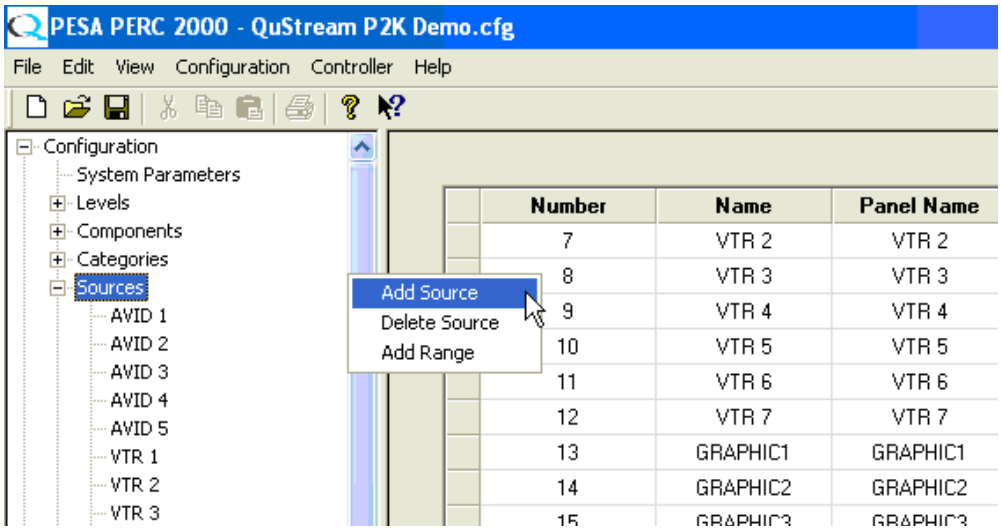


Figure 1-21 Right Click Mouse Options

Add Source – Clicking the Add Source option inserts a blank line in the sources spreadsheet and moves the cursor to the new entry line. From this line a new source can be added to the configuration.

Delete Source – If you wish to remove a source entry from the configuration spreadsheet, move the cursor to the source identifier beneath the Sources header in the Command Screen Window you wish to delete, highlight the source to be deleted and right click to open the option box. Select Delete Source and the source entry line is removed from the spreadsheet.

Add Range – Adds a range of sources using a category index type of naming scheme. You define the base name, such as "CAM," the starting index - such as 3 and the number of sources to create – such as 5. This example would create sources "CAM 3:" to "CAM 7."

NOTE	**The starting index is defined on a level-by-level basis.**

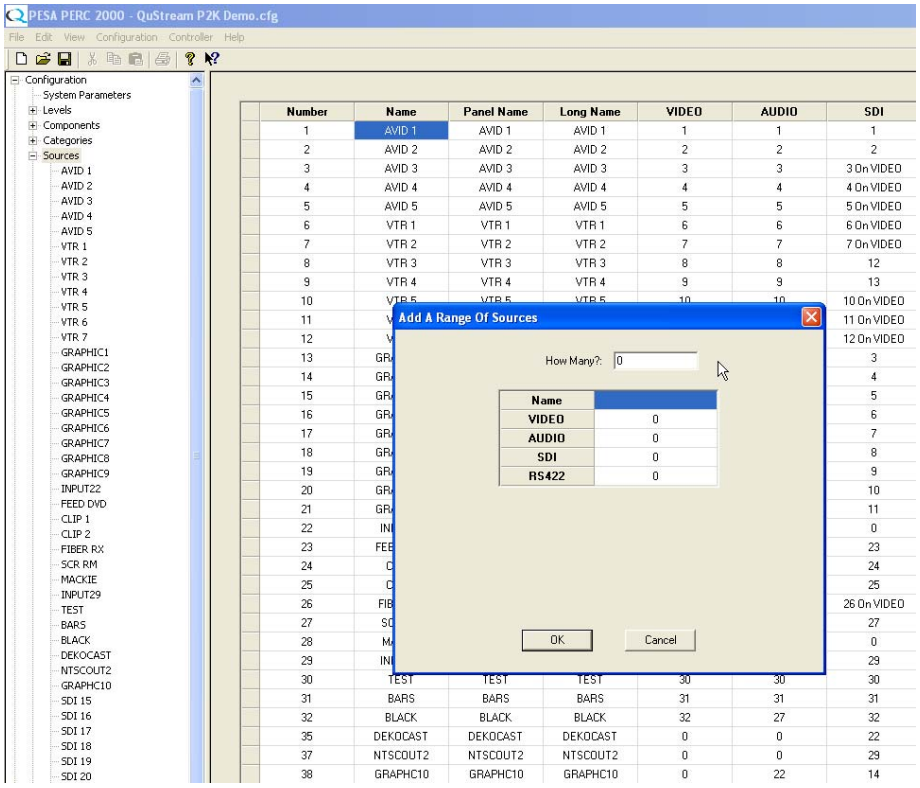


Figure 1-22 Source Range Entry Box

Spreadsheet Right Mouse Click Functions

When you right-click on any cell in the Source Configuration Spreadsheet, a pop-up menu will appear providing command options for the cell, as shown in Figure 1-23. Command items appearing in the pop-up menu will vary depending on which commands are pertinent for the data entered in the selected cell. Paragraph 1-3 discusses the function of common commands available from the pop-up menu. Remember that all commands listed and discussed below may or may not appear in the pop-up menu for a specific cell.

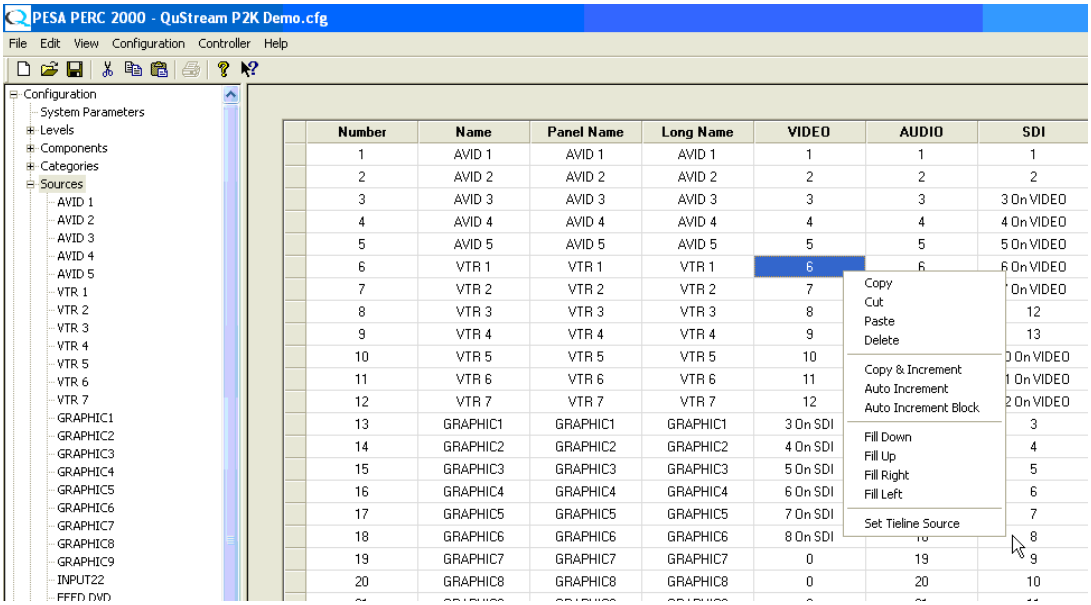


Figure 1-23 Sources Spreadsheet Right Mouse Click Options

1.6.5.5 Set Tieline Source

A Tie-line is a special purpose routing function that dedicates a physical source input and a physical destination output on different switching levels as a direct connected path through an external physical connection. Tie-line applications are discussed in Chapter 1 of this manual. If you are not familiar with the uses and structure of a tie-line QuStream highly recommends that you take the time to read the tutorial before proceeding with set-up.

Sources are linked to tie-lines using the **Set Tieline Source** command from the right-click command box. Click the cursor in the cell corresponding to the source and level you wish to assign to a tie-line. Right click and select the "Set Tieline Source" option from the menu. A graphic illustration, Figure 1-24, displays showing the level you are assigning on the right side. On the left side of the graphic you define the source and level that you wish to tie to the source on the level you are configuring using the pull-down menu boxes.

In the example shown, by selecting "Set Tieline Source" in the spreadsheet cell for VTR 1 on the SDI level, the graphic below appears and shows the SDI level as the source and by selecting 6 as the Input # and VIDEO as the Level from the pull-downs we have assigned a connection to route the source at physical input 6 on the VIDEO level through a tie-line to a dedicated physical input on the SDI level, which the controller will access when VTR 1 is selected as the source on the SDI level. On the source spreadsheet the text entry "6 On VIDEO" is automatically written in the cell for VTR 1 on the SDI level. This indicates that when VTR 1 is selected as a source on the SDI level, the source signal will be signal on physical input 6 of the Video level routed through an external tie-line to the SDI level.

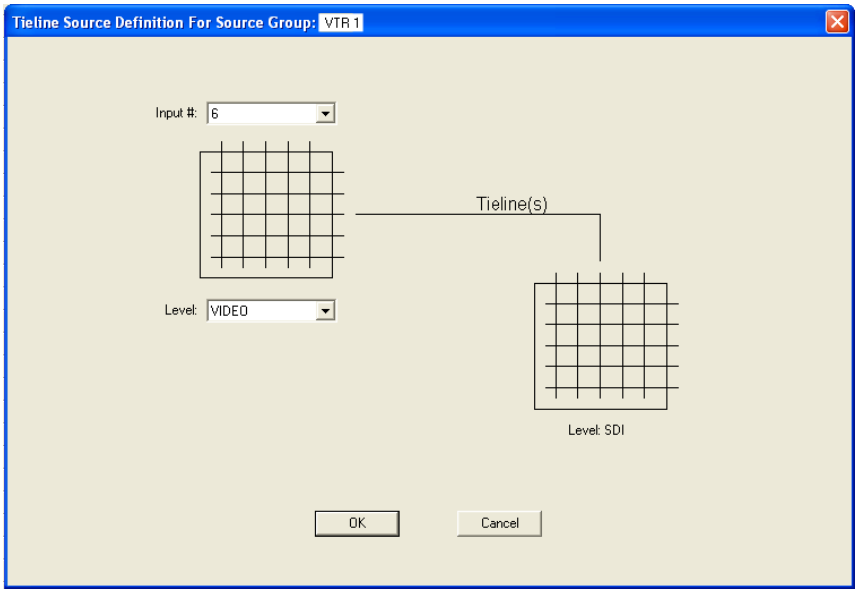
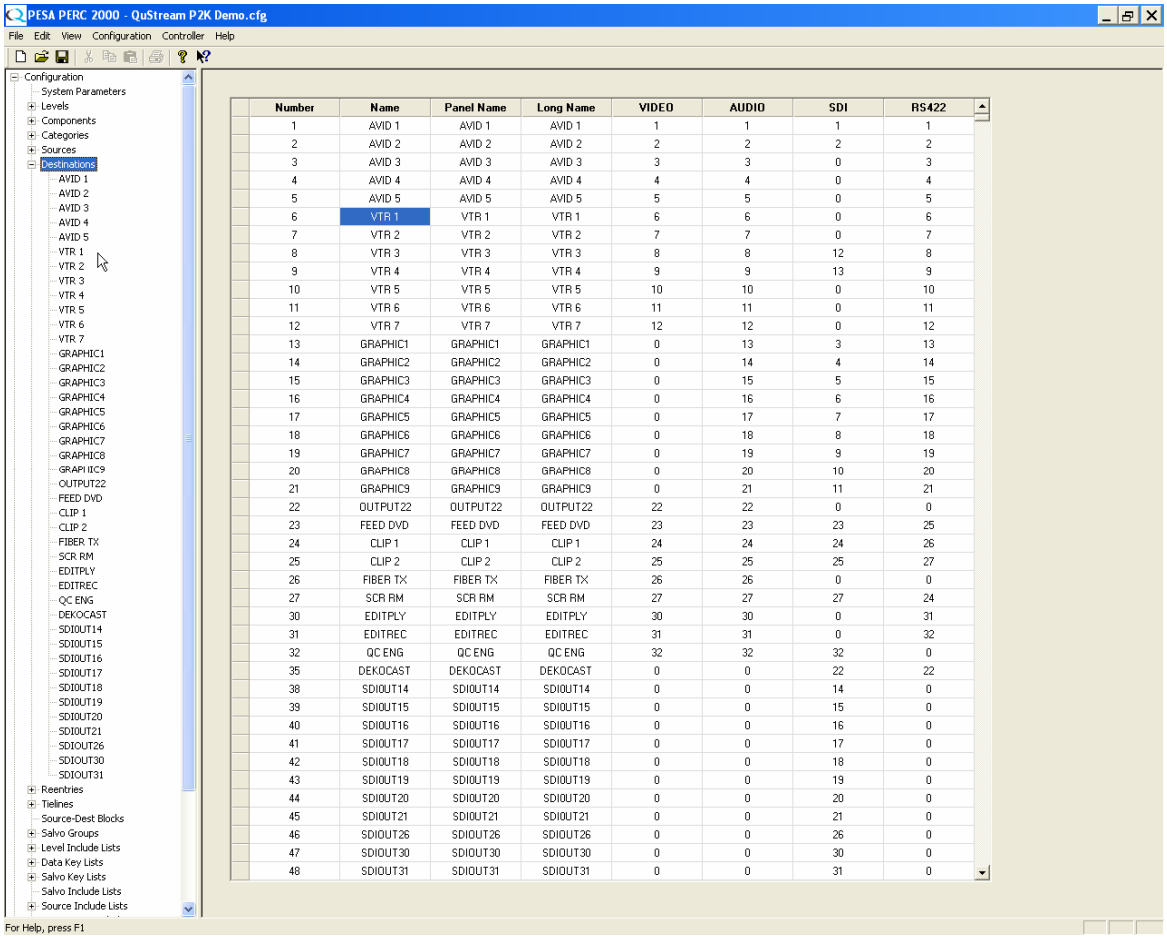


Figure 1-24 Tieline Configuration Screen

1.6.6 DESTINATIONS

Clicking the **Destinations** Command on the Configuration Command Tree accesses the Destination Configuration Screen, Figure 1-25. This screen allows you to define all of the destinations in the switcher configuration. From this screen each physical output from the system is assigned a name, a panel designator and linked to a physical output of a router frame. In router terminology, this screen essentially maps each physical destination (output) from the router to its logical output in level and panel designator nomenclature.

Note the Destinations Screen is in the form of a database spreadsheet with data entries for each destination made on individual rows from left to right. Each area of the Destinations set-up screen is introduced in the following paragraphs:



Number	Name	Panel Name	Long Name	VIDEO	AUDIO	SDI	RS422
1	AVID 1	AVID 1	AVID 1	1	1	1	1
2	AVID 2	AVID 2	AVID 2	2	2	2	2
3	AVID 3	AVID 3	AVID 3	3	3	0	3
4	AVID 4	AVID 4	AVID 4	4	4	0	4
5	AVID 5	AVID 5	AVID 5	5	5	0	5
6	VTR 1	VTR 1	VTR 1	6	6	0	6
7	VTR 2	VTR 2	VTR 2	7	7	0	7
8	VTR 3	VTR 3	VTR 3	8	8	12	8
9	VTR 4	VTR 4	VTR 4	9	9	13	9
10	VTR 5	VTR 5	VTR 5	10	10	0	10
11	VTR 6	VTR 6	VTR 6	11	11	0	11
12	VTR 7	VTR 7	VTR 7	12	12	0	12
13	GRAPHIC1	GRAPHIC1	GRAPHIC1	0	13	3	13
14	GRAPHIC2	GRAPHIC2	GRAPHIC2	0	14	4	14
15	GRAPHIC3	GRAPHIC3	GRAPHIC3	0	15	5	15
16	GRAPHIC4	GRAPHIC4	GRAPHIC4	0	16	6	16
17	GRAPHIC5	GRAPHIC5	GRAPHIC5	0	17	7	17
18	GRAPHIC6	GRAPHIC6	GRAPHIC6	0	18	8	18
19	GRAPHIC7	GRAPHIC7	GRAPHIC7	0	19	9	19
20	GRAPHIC8	GRAPHIC8	GRAPHIC8	0	20	10	20
21	GRAPHIC9	GRAPHIC9	GRAPHIC9	0	21	11	21
22	OUTPUT22	OUTPUT22	OUTPUT22	22	22	0	0
23	FEED DVD	FEED DVD	FEED DVD	23	23	23	25
24	CLIP 1	CLIP 1	CLIP 1	24	24	24	26
25	CLIP 2	CLIP 2	CLIP 2	25	25	25	27
26	FIBER TX	FIBER TX	FIBER TX	26	26	0	0
27	SCR RM	SCR RM	SCR RM	27	27	27	24
30	EDITPLY	EDITPLY	EDITPLY	30	30	0	31
31	EDITREC	EDITREC	EDITREC	31	31	0	32
32	QC ENG	QC ENG	QC ENG	32	32	32	0
35	DEKOCAST	DEKOCAST	DEKOCAST	0	0	22	22
38	SDIOUT14	SDIOUT14	SDIOUT14	0	0	14	0
39	SDIOUT15	SDIOUT15	SDIOUT15	0	0	15	0
40	SDIOUT16	SDIOUT16	SDIOUT16	0	0	16	0
41	SDIOUT17	SDIOUT17	SDIOUT17	0	0	17	0
42	SDIOUT18	SDIOUT18	SDIOUT18	0	0	18	0
43	SDIOUT19	SDIOUT19	SDIOUT19	0	0	19	0
44	SDIOUT20	SDIOUT20	SDIOUT20	0	0	20	0
45	SDIOUT21	SDIOUT21	SDIOUT21	0	0	21	0
46	SDIOUT26	SDIOUT26	SDIOUT26	0	0	26	0
47	SDIOUT30	SDIOUT30	SDIOUT30	0	0	30	0
48	SDIOUT31	SDIOUT31	SDIOUT31	0	0	31	0

Figure 1-25 Destinations Configuration Screen

1.6.6.1 Number

The left-most column is labeled NUMBER and is numerically sequential and automatically filled in as sources are added. The user can not change the entry in the Number column.

1.6.6.2 Name, Panel Name and Long Name

The next three columns allow the user to assign identifying names and/or acronyms to each destination according to the following formats:

Name – Any combination of up to 8 alphanumeric characters may be used to identify the destination.

Panel Name - Any combination of up to 8 alphanumeric characters may be used to identify the destination. The entry made in this column is the text string that will appear on system remote control panels with display capability.

Long Name – This column is essentially a free text space where the user may enter a name up to 32 characters in length for the destination. This name is only displayed on this configuration screen and may be used to more clearly identify an external device or system.

1.6.6.3 Switching Levels

To the right side of the three name columns you will see columns corresponding to each assigned system level. The entry (in most cases a number) in the column corresponding to each destination identifies and assigns the actual physical output from the switching device associated with the destination.

For example, look at entry number 6 in Figure 1-25 labeled VTR 1. Assume this nomenclature is assigned to a VTR with analog video, stereo analog audio and time code inputs. The video is derived from the VIDEO level, the two audio outputs (left and right) are each components (AUDIO1 and AUDIO2, respectively) of the AUDIO level and the time code output is derived from the RS422 level. Assume further that each input signal type to the VTR (video, audio and time code) is physically switched through a separate switcher frame. For discussion purposes assume the video is switched through a Cheetah video matrix switcher, audio is routed through a Cheetah DRS frame and the time code signal is routed through a PESA Tiger switcher.

Notice on Figure 1-25 that the numeric entry for VTR 1 in both the VIDEO and RS422 level columns is a 6 for each level. This entry tells the P2K controller that the video signal to the hardware device identified as VTR 1 will be present at physical output number 6 of the switching matrix identified by the logical switching level named VIDEO and that the time code signal for VTR 1 will be present at physical output number 6 of the matrix defined by the logical level named RS422.

The numeric entry for VTR 1 in the column corresponding to the logical switching level named AUDIO is also a 6. Remember, however, that logical level AUDIO is composed of two components named AUDIO1 and AUDIO2 and that each audio signal is routed through separate routing circuitry. In this case, the numeric 6 entry indicates that the left channel input signal to VTR 1 is derived from physical output number 6 of the switching matrix identified as AUDIO 1 under the logical level named AUDIO and that the right channel input to VTR 1 is derived from physical output number 6 of the switching matrix identified as AUDIO 2 under the logical level named AUDIO. In matrix space, the controller treats logical level AUDIO as a single entity and switches both components simultaneously. These signals may be derived from two separate routing frames or may be from one frame with the matrix space configured as two or more separate routing units using output offset values to define the physical outputs from the switching matrix. This audio example conceptualizes, in a very basic application, several very powerful tools available through the P2K system. If you do not fully understand this example, you may refer to Chapter 1 of this manual for a tutorial on advanced switching system applications.

Note also that an entry of 0 (zero) appears under the logical level SDI column for VTR 1. This entry indicates that there is no valid destination for VTR 1 from the SDI logical switching level.

1.6.6.4 Navigating the Destinations Spreadsheet

The Destinations configuration screen is accessed by clicking the Destinations command entry under the Configuration Command tree. The entire destination configuration spreadsheet is displayed for easy access. When the Destinations tab is expanded, note that a listing of all assigned destination identifiers appears below the parent command. Clicking any of the identifiers in the list will cause the spreadsheet cursor to immediately move to and highlight the configuration entry row associated with the destination.

Right clicking either the Destinations command tab or any source identifier entry below it, causes a click box as shown in Figure 1-26 to appear with the following options:

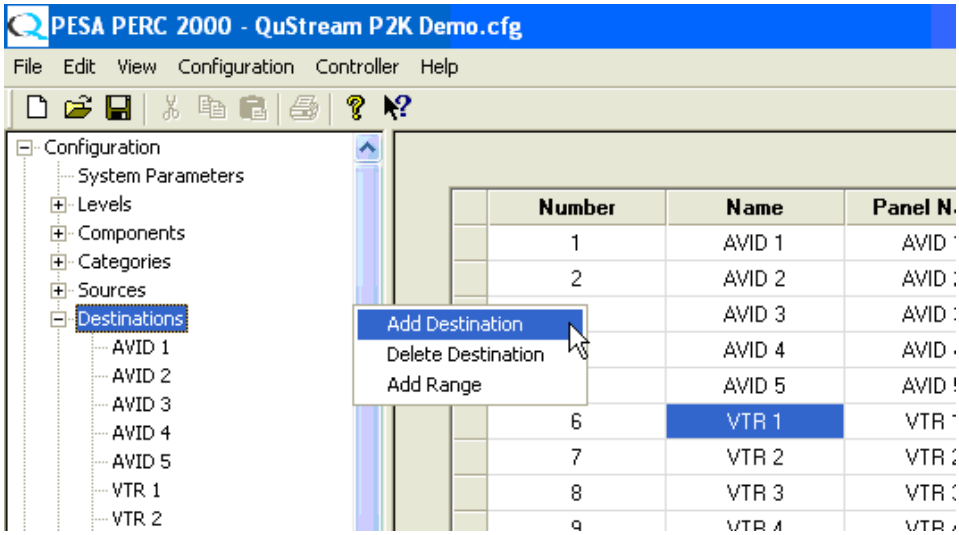


Figure 1-26 Right Click Mouse Functions

Add Destination – Clicking the Add Destination option inserts a blank line in the sources spreadsheet and moves the cursor to the new entry line. From this line a new destination can be added to the configuration.

Delete Destination – If you wish to remove a destination entry from the configuration spreadsheet, move the cursor to the destination identifier beneath the Destinations tab in the Command Screen Window you wish to delete, highlight the destination to be deleted and right click to open the option box. Select Delete Destination and the source entry line is removed from the spreadsheet.

Add Range – Adds a range of sources using a category index type of naming scheme. You define the base name, such as "CAM," the starting index - such as 3 and the number of sources to create – such as 5. This example would create sources "CAM 3:" to "CAM 7."

NOTE	**The starting index is defined on a level-by-level basis.**

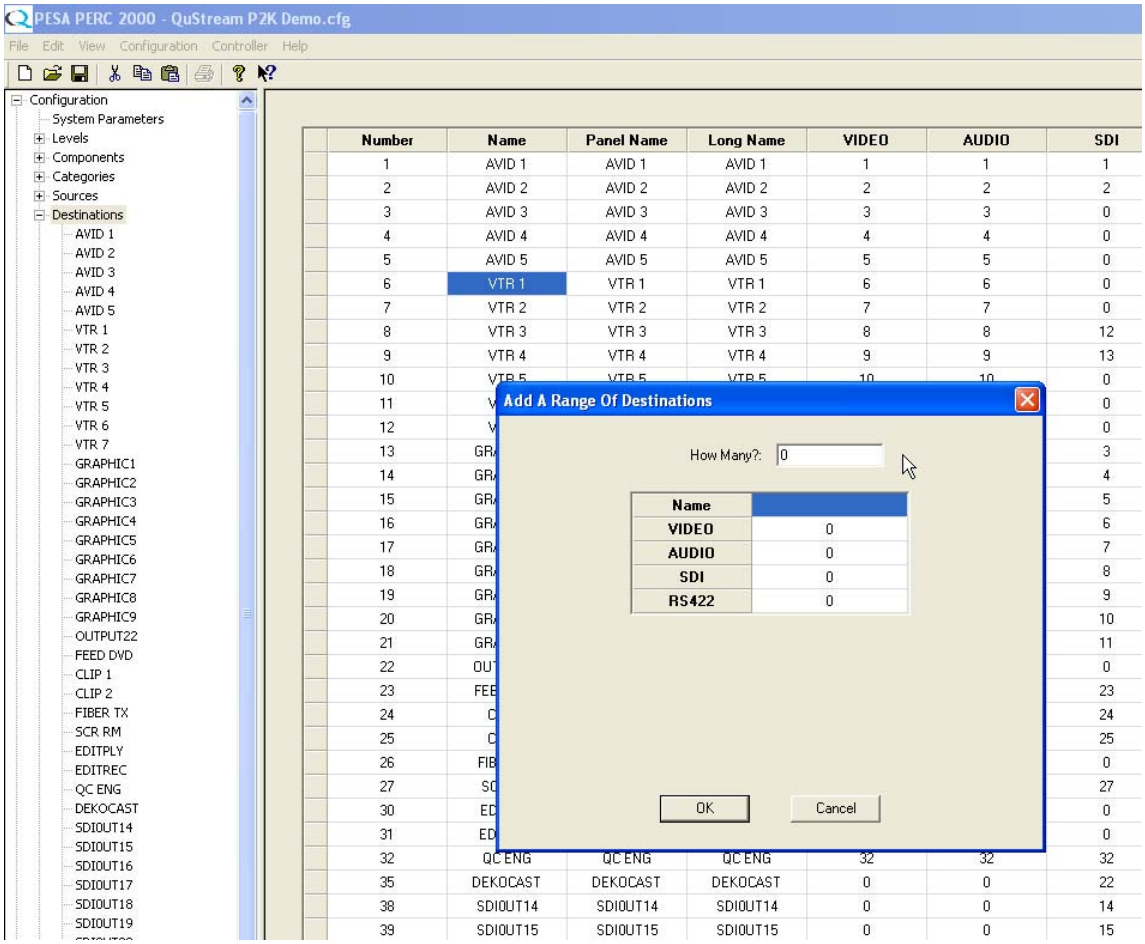


Figure 1-27 Destination Range Entry Box

Right Mouse Click Functions

When you right-click on any cell in the Destination Configuration spreadsheet, a pop-up menu appears providing command options for the cell, as shown in Figure 1-28. Command items appearing in the pop-up menu will vary depending on which commands are pertinent for the

data entered in the selected cell. Paragraph 1-3 discusses the function of common commands available from the pop-up menu. Remember that all commands listed and discussed below may or may not appear in the pop-up menu for a specific cell.

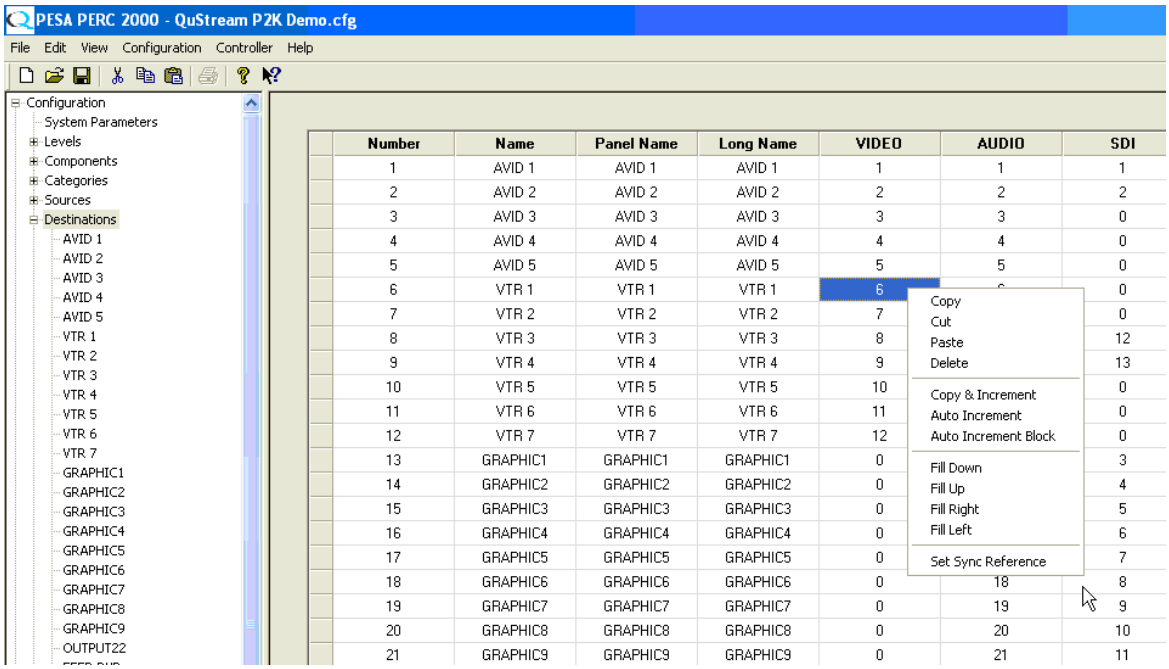


Figure 1-28 Destination Spreadsheet Right Mouse Click Functions

1.6.6.5 Set Sync Reference

Typical Cheetah installations allow input of up to two sources of external Sync Reference signals for synchronizing switching times and destination output signals. P2K allows you to assign either of the sync sources to any single destination or multiple destinations simultaneously.

Destinations are mapped to sync signals using the **Set Sync Reference** command from the right-click command box. Click the cursor in the single cell corresponding to the destination and level, or to selected multiple destination cells you wish to map to a sync source. Right click and select the "Set Sync Reference" option from the menu. A window, Figure 1-29, displays identifying the level and current destination you are configuring at the top. In the middle of the window you assign a sync source to the destination using the pull-down menu boxes.

Three radio buttons allow you to assign the sync source to only the Current Destination, All Destinations or Selected Destinations. Choose the Selected Destinations option when multiple cells have been highlighted.

In the example shown, by selecting “Set Sync Reference” in the spreadsheet cell for VTR 1 on the Video level, the window below appears and shows VTR 1 on the VIDEO level as the current destination. By selecting SYNC1 from the pull-down we have assigned the physical output named VTR 1 on the VIDEO level to synchronize to the reference input named SYNC1 for the current destination only.

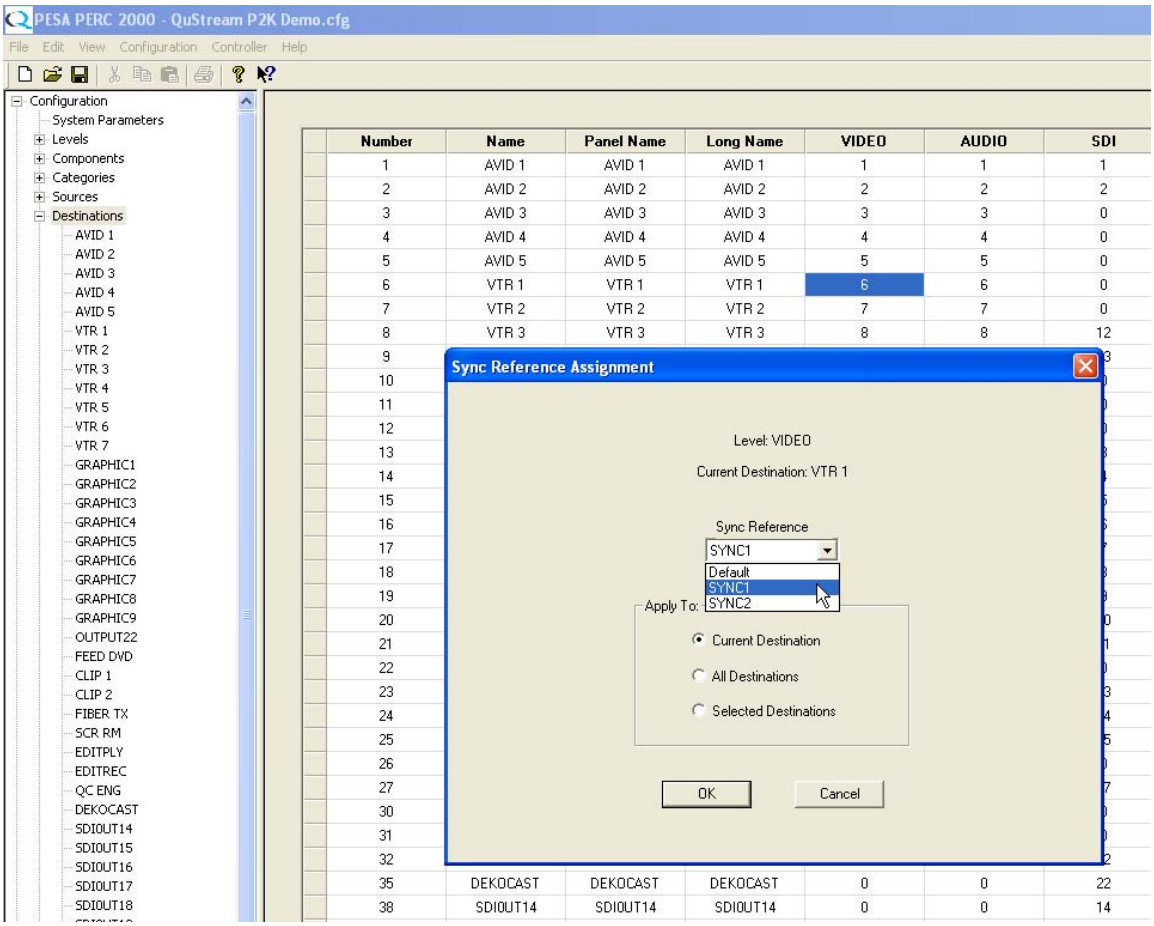


Figure 1-29 Sync Reference Assignment Window

1.6.7 REENTRIES CONFIGURATION SCREEN

The concept of a reentry function in a routing system is discussed in Chapter 1 of this manual. Just as a quick review, a Reentry is a switching function that allows routing a single source to multiple destinations with a single switch.

In implementation, think of a reentry as a virtual path that is both a source and destination. For example assume you have a source named SRC1 that you would like to simultaneously switch to destinations DST1, DST2, and DST3, Figure 1-30. Reentry REENT1 is created and switched to the three destinations. With a single logical switch, SRC1 can now be switched to REENT1 and the signal will arrive at all three destinations at the same time. While similar in

operation to a salvo function, the major difference is that a salvo must be set-up as part of a configuration file. Once a reentry function is assigned it can be selected as needed just as any other source or destination from system remote control panels. The maximum number of reentries is 256.

Reentry functions are assigned using the Reentry Configuration Screen, Figure 1-31.

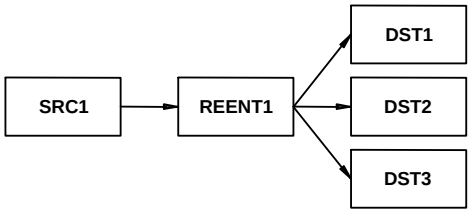


Figure 1-30 Reentry Example

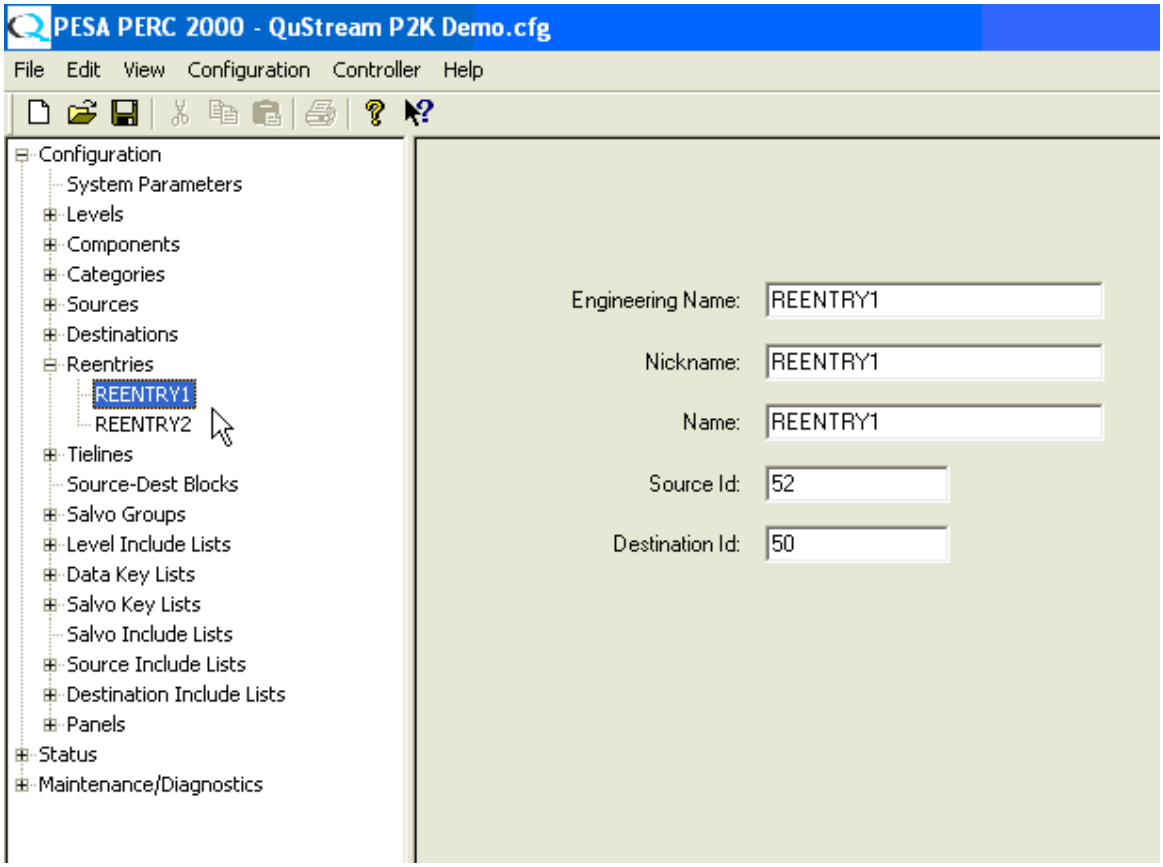


Figure 1-31 Reentry Configuration Screen

1.6.7.1 Engineering Name, Nickname and Name

These fields allow an identifying name to be assigned to the reentry path. In operation, this is the name used to signify both the source and destination when using a reentry path. Each of the name fields is discussed below:

Engineering Name – Any combination of up to 8 alphanumeric characters may be used to assign the Engineering Name to the reentry.

Nickname - Any combination of up to 8 alphanumeric characters may be used to assign the Nickname to the reentry.

Name – This field is essentially a free text space where the user may enter a name up to 32 characters in length for the source. This name is only displayed on this configuration screen and may be used to more clearly comment the reentry function.

1.6.7.2 Defining a Reentry

Remember that a reentry is a virtual, meaning there is no physical input or output, signal path used as both a source and destination. In order to configure a reentry it is necessary to program the Source Id and Destination Id as follows:

Source Id – Click the cursor in the Source Id cell and enter the Source Identification Number you wish to assign to the reentry function. The number may be any number NOT used to identify an actual physical source. Typically, the way to choose a valid Id number is to look at the Sources Configuration Screen and note the last Id number used for a physical source. In the example shown Source Id 52 is used for the reentry path named **REENTRY1**. In this configuration file, 50 is the last source number assigned to a physical source. Therefore 52 is a valid and convenient number to assign to the reentry source.

Destination Id – Click the cursor in the Destination Id cell and enter the Destination Identification Number you wish to assign to the reentry function. The number may be any number NOT used to identify an actual physical destination. Typically, the way to choose a valid Id number is to look at the Destinations Configuration Screen and note the last Id number used for a physical destination. In the example shown Destination Id 50 is used for the reentry path named **REENTRY1**. In this configuration file, 48 is the last number assigned to a physical destination. Therefore 50 is a valid and convenient number to assign to the reentry destination.

1.6.7.3 Adding or Deleting a Reentry

Add Reentry – Clicking the Add Reentry option, Figure 1-32, opens a new reentry configuration screen. From this screen a new reentry path can be added to the file configuration.

Delete Reentry – If you wish to remove a reentry path from the configuration file, move the cursor to the reentry name beneath the Reentries tab in the Command Screen Window you wish to delete, Figure 1-32, highlight the reentry to be deleted and right click to open the option box. Select Delete Reentry and the reentry is removed from the configuration.

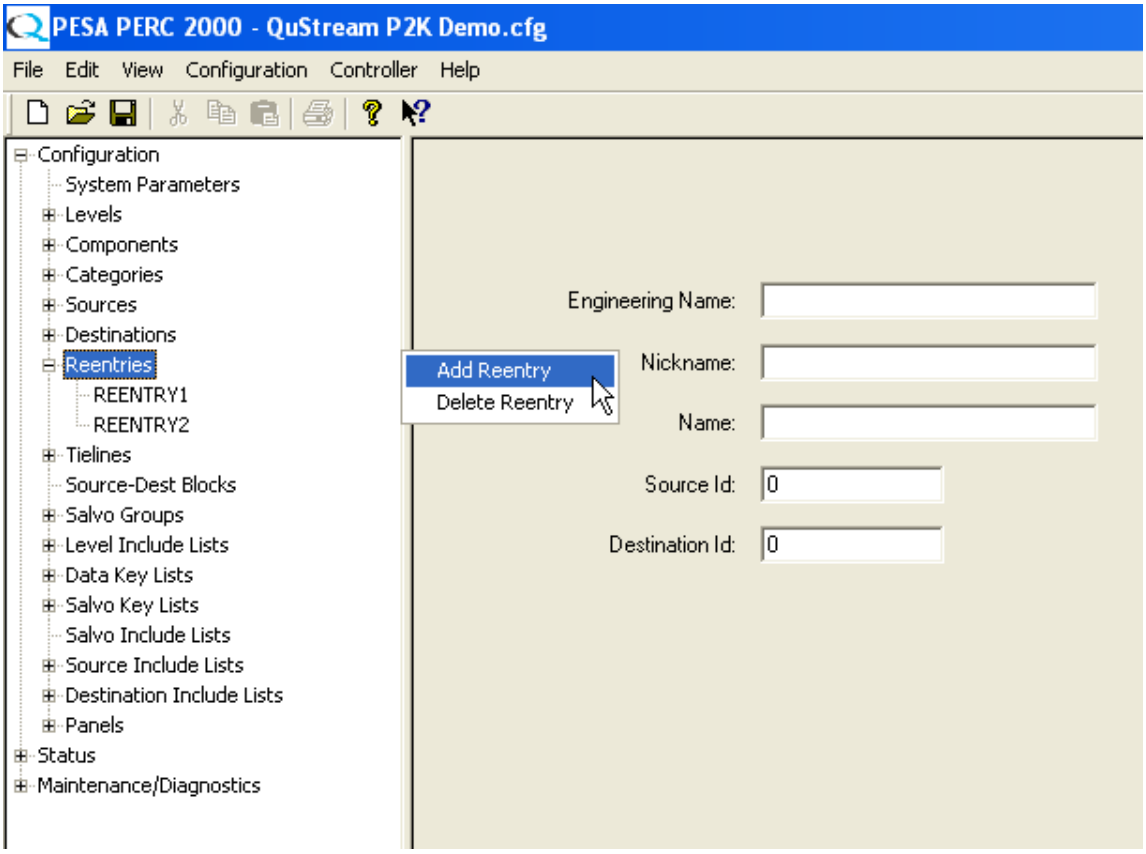


Figure 1-32 Adding or Deleting a Reentry

1.6.8 TIE-LINES CONFIGURATION SCREEN

The concept of tie-lines in a routing system is discussed in Chapter 1 of this manual. Just as a quick review, a tie-line is a physical connection between two switching levels – one level being the signal output, or tie-line source; and the other being a signal input, or tie-line destination. An excellent application example of the use of a tie-line is illustrated within the set-up screens presented here. Before we discuss the entries necessary in the configuration set-up to establish a tie-line, let's take a closer look at the example embedded in these screens.

Suppose you have a switching application where an analog video source needs to be available as an analog output and also converted by external equipment to a digital signal and be available from a digital video level in addition to the analog output. In order to implement such an arrangement we would like to have a dedicated output from the analog level named Video and a dedicated input to the digital level, in this example named SDI. The video conversion equipment is physically inserted between the dedicated physical output from Video and the dedicated physical input to SDI. Whenever we select one of the analog sources on Video as the desired output to one or more of the SDI destinations the controller will transparently switch the analog source to our dedicated output from Video, through the conversion equipment and apply the converted digital signal to our dedicated input of SDI, where that input is switched by

SDI to the selected destination output of SDI. This actual physical connection made between the two switching levels is the physical portion of a tie-line. In addition, we have to configure the controller to recognize the tie-line by programming the level name and physical connection of the signal output and input, and assign an identification name to the tie-line – this is done by the Tie-Line configuration screen, Figure 1-33.

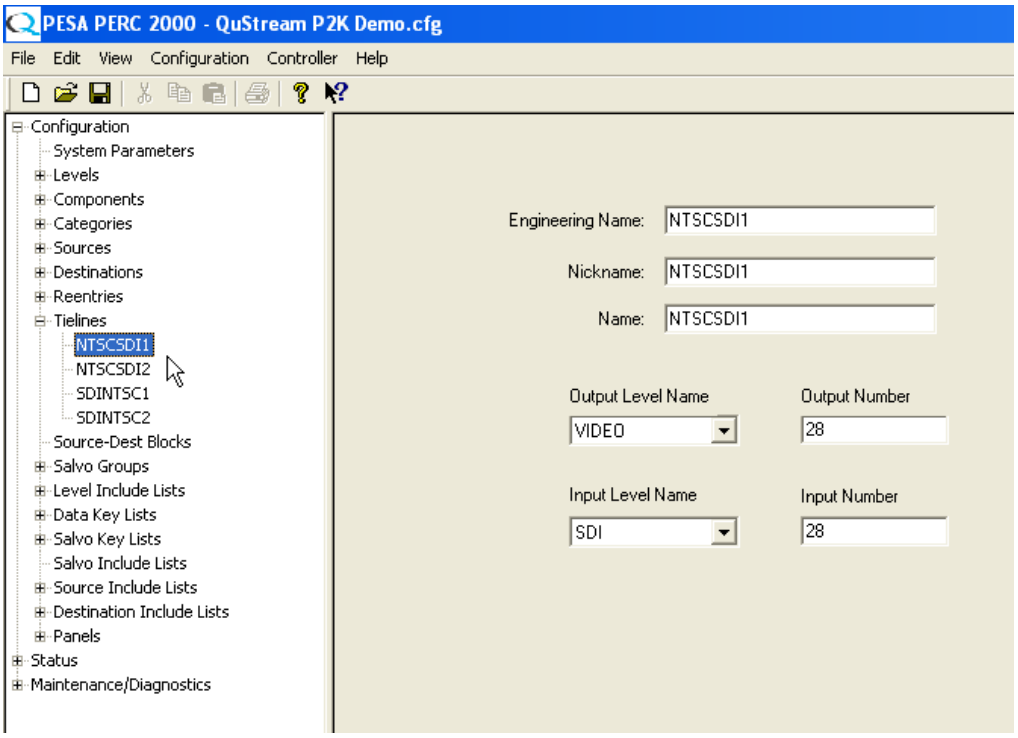


Figure 1-33 Tie-Line Configuration Screen

1.6.8.1 Engineering Name, Nickname and Name

In the case of the tie-line, QuStream recommends that you choose a name that is descriptive of the function of the tie-line. The name you assign is not used on other status screens and is not used or seen by an operator. In this example, notice that there are four tie-lines used in this system. The name NTSCSDI1 is chosen to signify the first of two tie-line connections dedicated between an output (destination) of NTSC analog video from the level named Video and an input (source) of digital SDI compliant video to the level named SDI. In similar manner, the name SDINTSC2 signifies the second of two tie-line connections dedicated between an output (destination) from level SDI and an input (source) to level Video. Each of the name fields is discussed below:

Engineering Name – Any combination of up to 8 alphanumeric characters may be used to assign the Engineering Name to the tie-line.

Nickname - Any combination of up to 8 alphanumeric characters may be used to assign the Nickname to the tie-line.

Name – This field is essentially a free text space where the user may enter a name up to 32 characters in length for the source. This name is only displayed on this configuration screen and may be used to more clearly comment the tie-line function.

1.6.8.2 Defining a Tie-Line

Remember that a tie-line is a hard-wired connection between a dedicated output (destination) from one level and a dedicated input (source) on another level. It is important to clearly understand the concept that a tie-line is a physical connection. It may be helpful to think of a tie-line as a wire conductor. Every conductor has two ends and what you put into one end appears at the other end. As elementary as this seems it illustrates the point that a conductor may loosely be thought of as having an input end and an output end. Equating this to a tie-line the user needs to fully understand that the Output Level and Number entered in the set-up screen is actually the *input* to the physical tie-line and the *output* from the tie-line is the signal that enters the physical connection assigned by the Input Level Name and Number entry. In order to configure a tie-line it is necessary to program the destination and source as follows:

Output Level Name – This entry field contains a pull-down menu containing all the levels defined in the configuration. Move the cursor to and click on the switching level from which you wish to derive the signal routed to the tie-line.

Output Number – Enter the number of the physical output connection from the level entered above from which you wish to derive the signal routed to the tie-line.

Input Level Name – This entry field contains a pull-down menu containing all the levels defined in the configuration. Move the cursor to and click on the switching level you wish to receive the signal from the tie-line.

Input Number – Enter the number of the physical input connection of the level entered above you wish to receive the signal from the tie-line.

In our example configuration screen, we have assigned the name NTSCSDI1 to a tie-line deriving its source signal from physical output 28 on switching level VIDEO and directing its destination signal to physical input 28 on switching level SDI.

1.6.9 SOURCE-DESTINATION (DEST) BLOCKS CONFIGURATION SCREEN

The Source-Dest Block Configuration Screen, Figure 1-34, allows the user to selectively block any source from being switched to a designated destination. Clicking on the **Source-Dest Blocks** parent entry in the Command Screen Window brings up a clean copy of the working screen. Note that the screen has three areas:

Destination Name – This field is where you enter the name of the destination to which you wish to apply source blocks. There are two way to enter a destination name. You can simply type the name of the destination or you can copy and paste the name from a cell of the destination screen.

Blocked Sources – Sources you wish to block from access by the named destination are listed in this column.

Available Sources – This column contains a listing of all the sources which may be switched to the named destination.

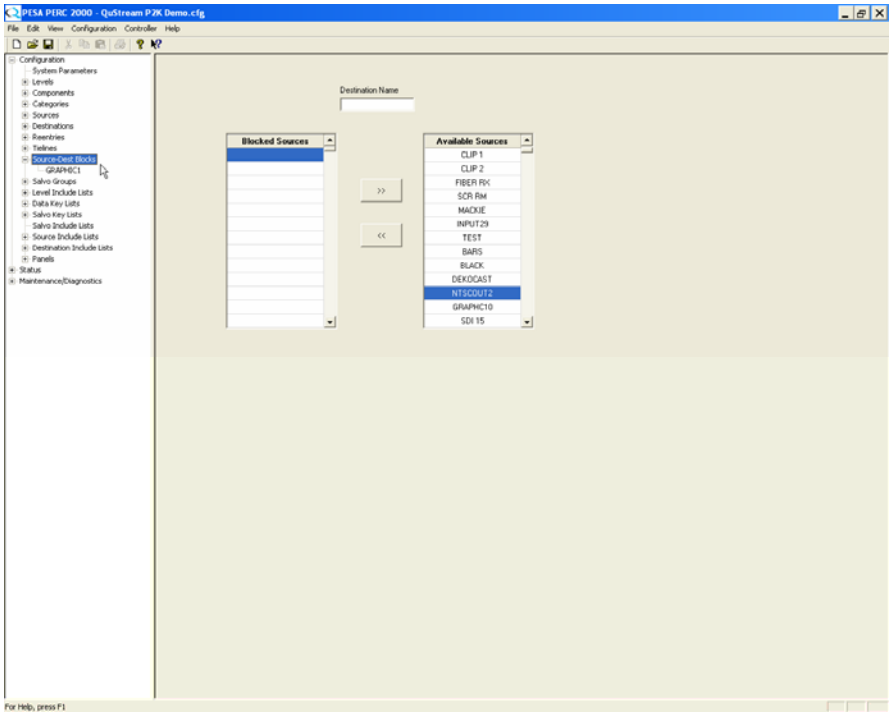


Figure 1-34

Initially, all sources are listed in the Available Source list box. Listed sources are moved between the two list boxes using the two arrows between the boxes. In order to move a source from available to blocked, highlight the source you desire to block from access by the destination and click the arrow pointing from the available list to the blocked list. You may list any number of sources you wish to block. In order to unblock a source, highlight and move the source name from the blocked list to the available list using the arrow pointing to the available list.

Expanding the tree under the Source-Dest Block parent header in the command tree window opens a listing of destinations assigned to allow source blocking, Figure 1-35. If you wish to access the configuration screen for a specific destination, click on the destination name in the listing. If you wish to access a blank Source-Dest Block configuration screen, click on the Source-Dest Block parent header in the command tree window.

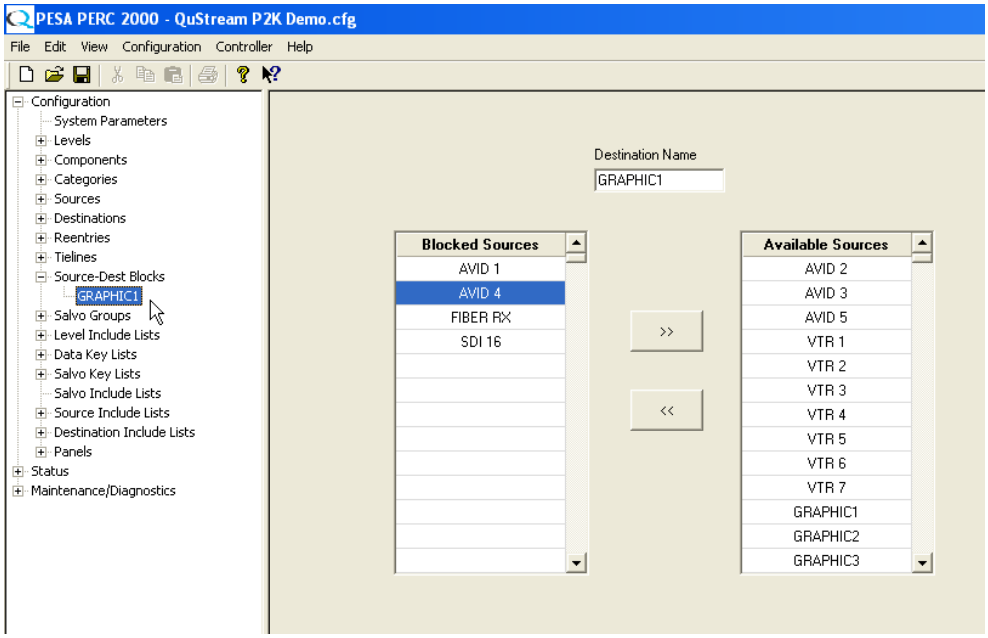


Figure 1-35

1.6.10 SALVO GROUPS CONFIGURATION SCREEN

A salvo is a group of predefined switches made simultaneously with a single “take” command. Salvos groups are defined on the Salvo Groups Configuration Screen, Figure 1-36.

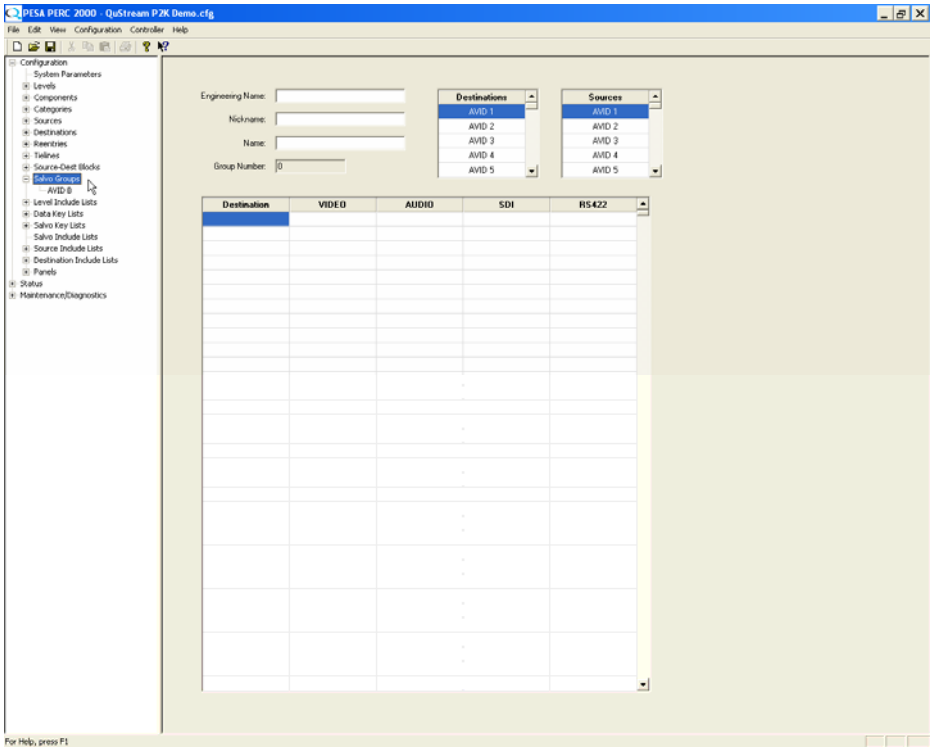


Figure 1-36 Salvo Groups Configuration Screen

The example screen shown in Figure 1-37 illustrates a salvo group named AVID B that, when executed, switches the source named BARS to the indicated levels of the four listed destinations. Salvo groups may be assigned by group name to a single control panel key. When this key is pressed all switches defined in the salvo group will be simultaneously switched. All switches in a salvo are taken within the same vertical interval.

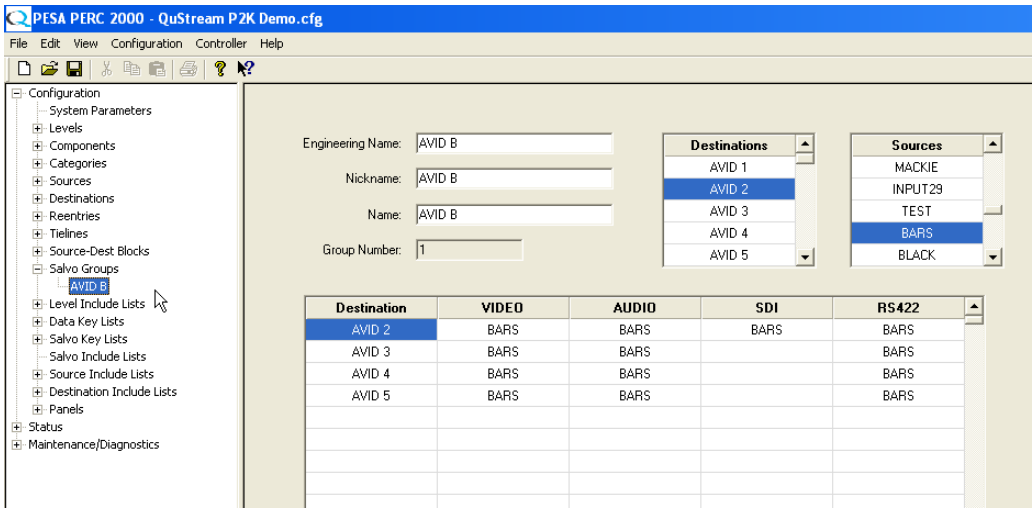


Figure 1-37 Salvo Group Configuration Fields

In order to define a salvo group, access a blank salvo group configuration screen as follows: right click on the parent Salvo Groups entry in the command tree window and select the Add Salvo Group command from the pop-up box, Figure 1-38.

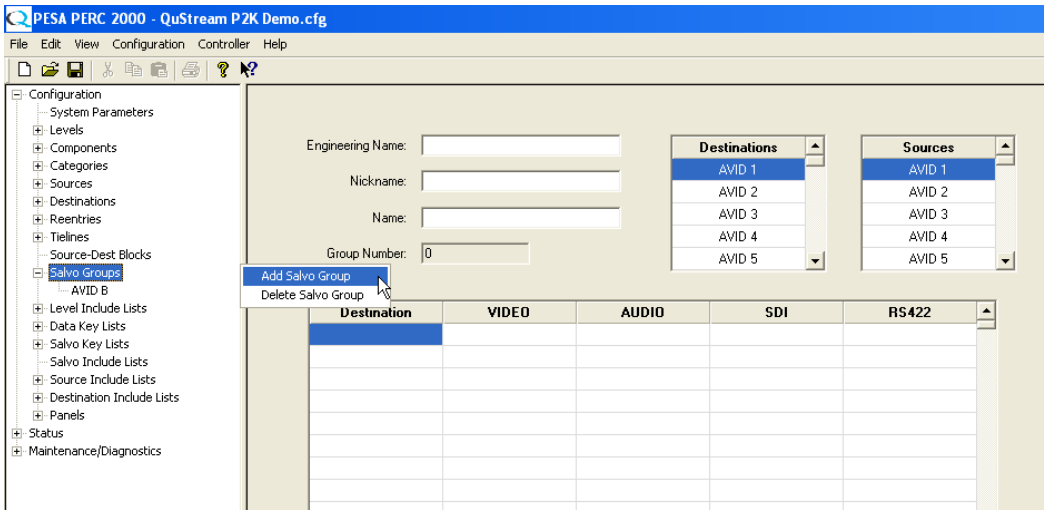


Figure 1-38 Right Mouse Click Functions

1.6.10.1 Engineering Name, Nickname, Name and Group Number

Salvo group names may be from one to eight characters in length and constructed using uppercase letters, numbers, and spaces. The first character must be a letter. As in most other P2K configuration screens three fields are provided for naming the salvo group. In the case of the salvo configuration, QuStream recommends that you choose a name that is descriptive of the function of the salvo. In this example, the name AVID B, for analog video – bars, is chosen to signify a salvo that switches a reference source called BARS to the listed analog destinations. Each of the name fields is discussed below:

Engineering Name – Up to 8 alphanumeric characters are allowed when assigning the Engineering Name to the salvo group.

Nickname – Up to 8 alphanumeric characters are allowed when assigning the Nickname to the salvo group.

Name – This field is essentially a free text space where the user may enter a descriptive name, up to 32 characters in length, for the salvo group. This name is only displayed on this configuration screen and may be used to more clearly comment the salvo function.

Group Number – The group number is sequentially assigned by the software and is not user definable.

1.6.10.2 Defining A Salvo Group

Click the cursor in the top cell of the Destination column. Locate the first destination you wish to assign to the salvo group from the Destinations list at the top of the screen and double-click the entry to copy the destination name into the cell. In like manner, move the cursor to the cells under the various level columns and using the entries in the Source list double-click the name of the source you wish to switch to the indicated level of the destination. If desired, you may enter additional destinations and assign sources to them.

1.6.11 LEVEL INCLUDE LISTS CONFIGURATION SCREEN

The Level Include Lists Configuration Screen, Figure 1-39, allows the user to selectively build a named list of switching levels which, when assigned to a specific remote control panel, designates the levels that panel is authorized to control. Multiple panels may share a Level Include List. Clicking on the Level Include Lists parent entry in the Command Screen Window brings up a clean copy of the working screen. Note that the screen has three areas:

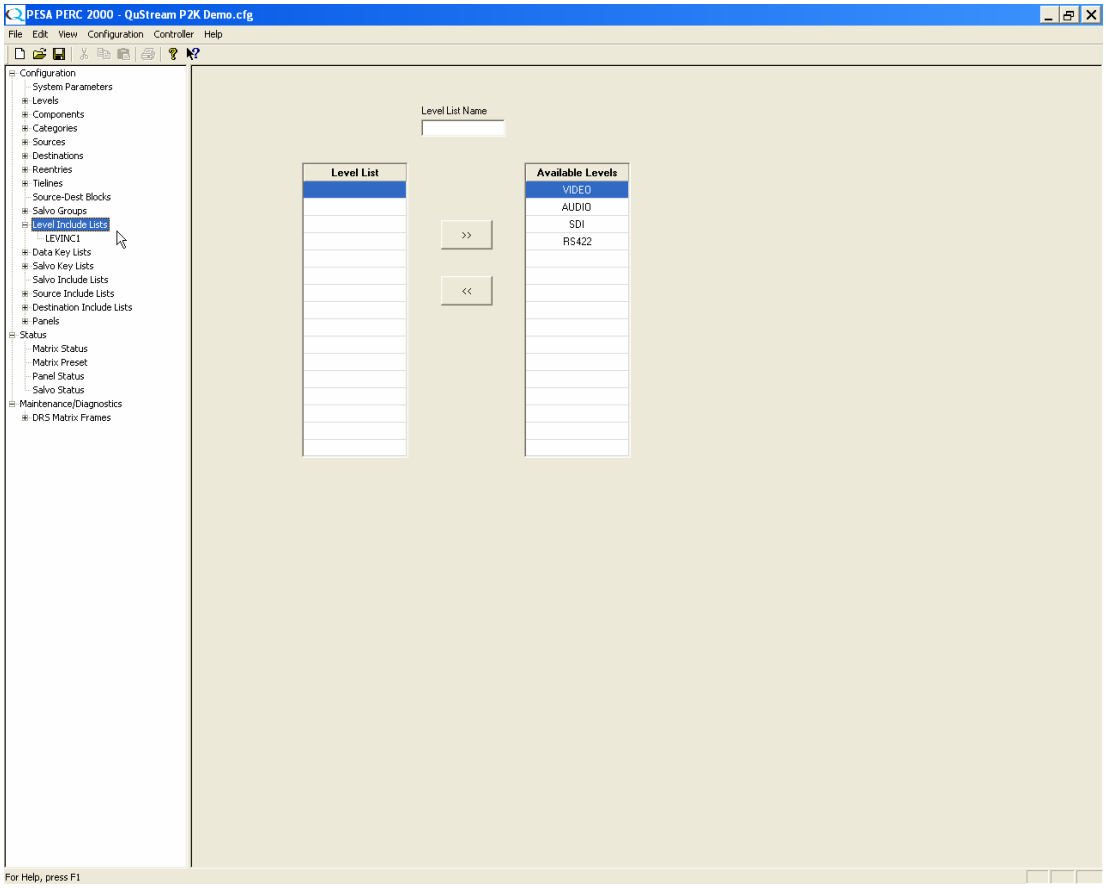


Figure 1-39 Level Include Lists Configuration Screen

Level List Name – This field is where you assign a name to the Level Include List. Names can be from one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter.. QuStream highly recommends that you choose a name which is somewhat descriptive of the function of the level include list.

Level List – Levels listed in this column are accessible by remote control panels functioning under the named level include list.

Available Levels – This column contains a listing of all levels which may be included in the level include list.

Initially, all levels are listed in the Available Levels list box. Listed levels are moved between the two list boxes using the two arrows between the boxes. In order to move a level from the available list to the level include list, highlight the level you want to include in the list and click the arrow pointing from the available list to the include list. In order to disallow a level from the include list, highlight and move the level name from the include list to the available list using the arrow pointing to the available list.

Expanding the tree under the Level Include Lists parent header in the command tree window opens a listing of named level include lists, Figure 1-40. If you wish to access the configuration screen for a specific level include list, click on the name in the column listing. If you wish to access a blank Level Include Lists configuration screen, click on the Level Include Lists parent header in the command tree window.

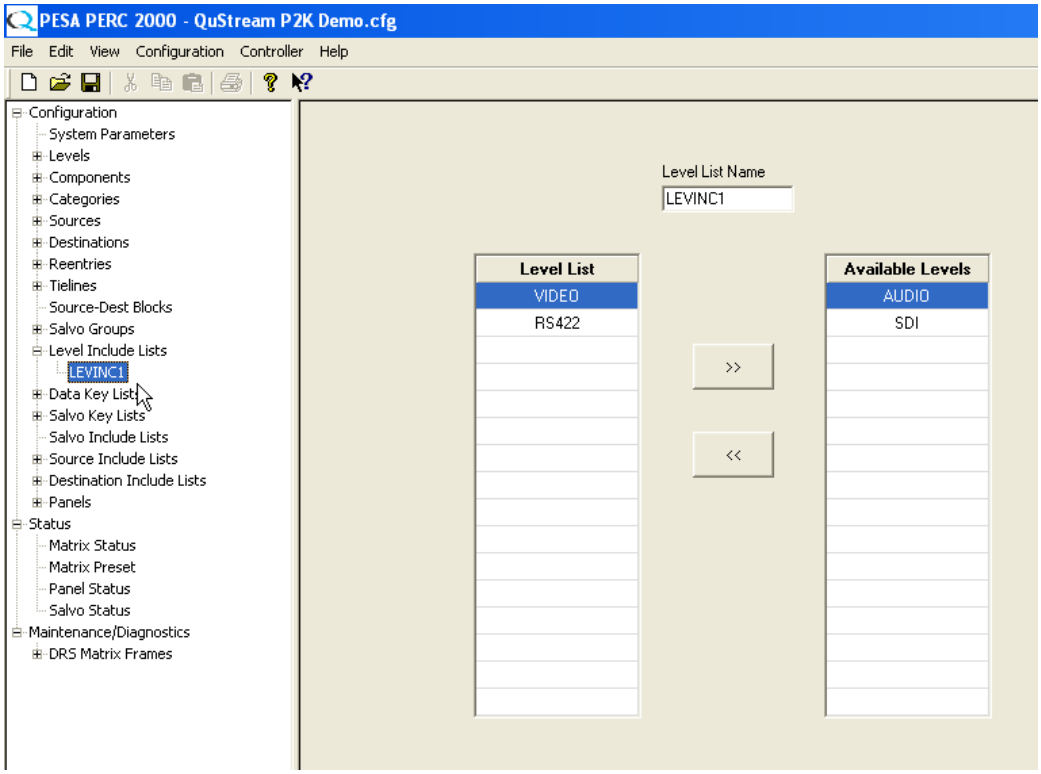


Figure 1-40

1.6.12 DATA KEY LISTS CONFIGURATION SCREEN

The Data Key Lists Configuration Screen, Figure 1-41, allows the user to generate one or more named lists which assign specific functions to each configurable key on a remote control panel. Multiple panels may share a data key list as long as they are the same type of panel. Different panel types may not use the same data key list. Clicking on the Data Key Lists parent entry in the Command Screen Window brings up a clean copy of the configuration screen. It is from this screen that you program the keys on the various remote control panels in a system. Let's take a look at the elements you will find here.

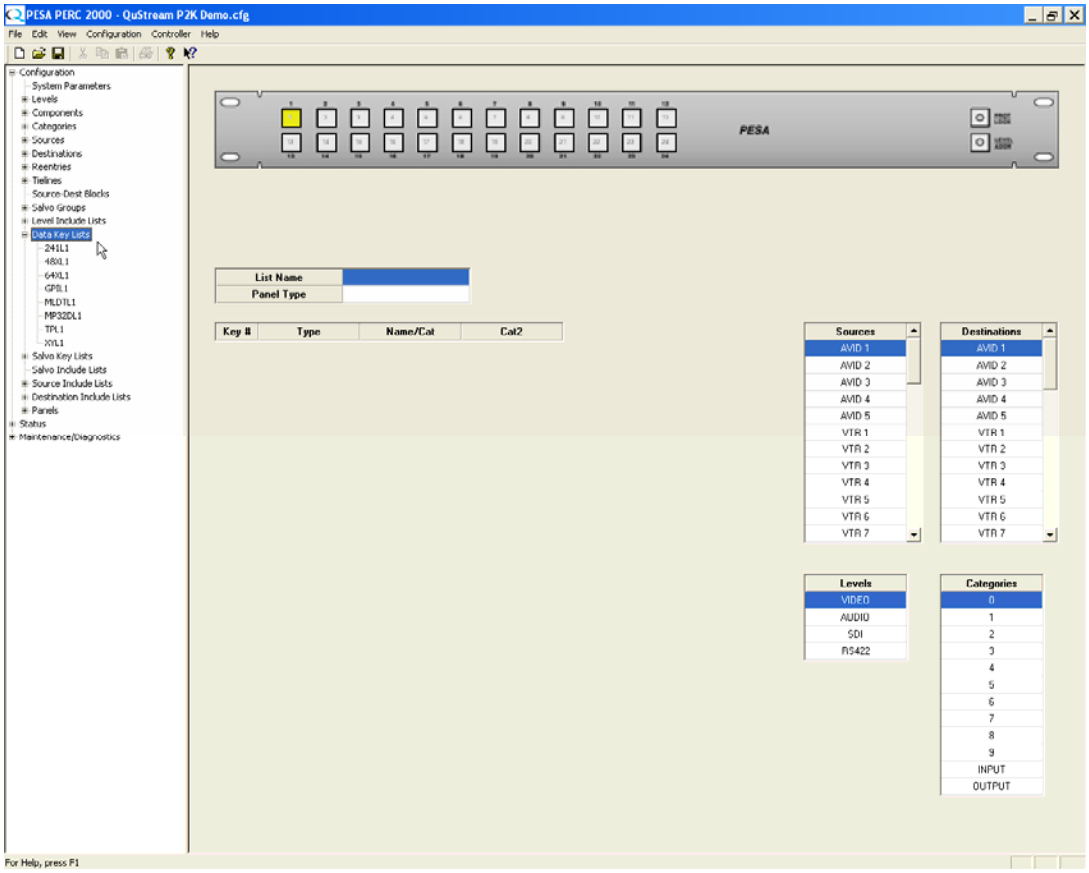


Figure 1-41 Data Key Lists Configuration Screen

To make the programming task more straightforward, a visual image of the type of remote control panel you are programming is displayed at the top of the configuration screen once the panel type is entered. There are a number of different remote control panels in the QuStream product line – each is designed for a specific purpose – and each panel has a different key and display layout. Displaying a graphic image provides an easy guide for the user to follow when configuring a specific type of panel. Before a panel type is assigned, the graphic display defaults to a random graphic.

1.6.12.1 Defining List Name and Panel Type

Note the fields labeled List Name and Panel Type, Figure 1-42. Enter a name for the data key list (up to 8 characters of letters and numbers). PESA recommends you assign a name that is somewhat descriptive of the function of the data key list or the type of panel it controls. Data Key List names may be from one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter.

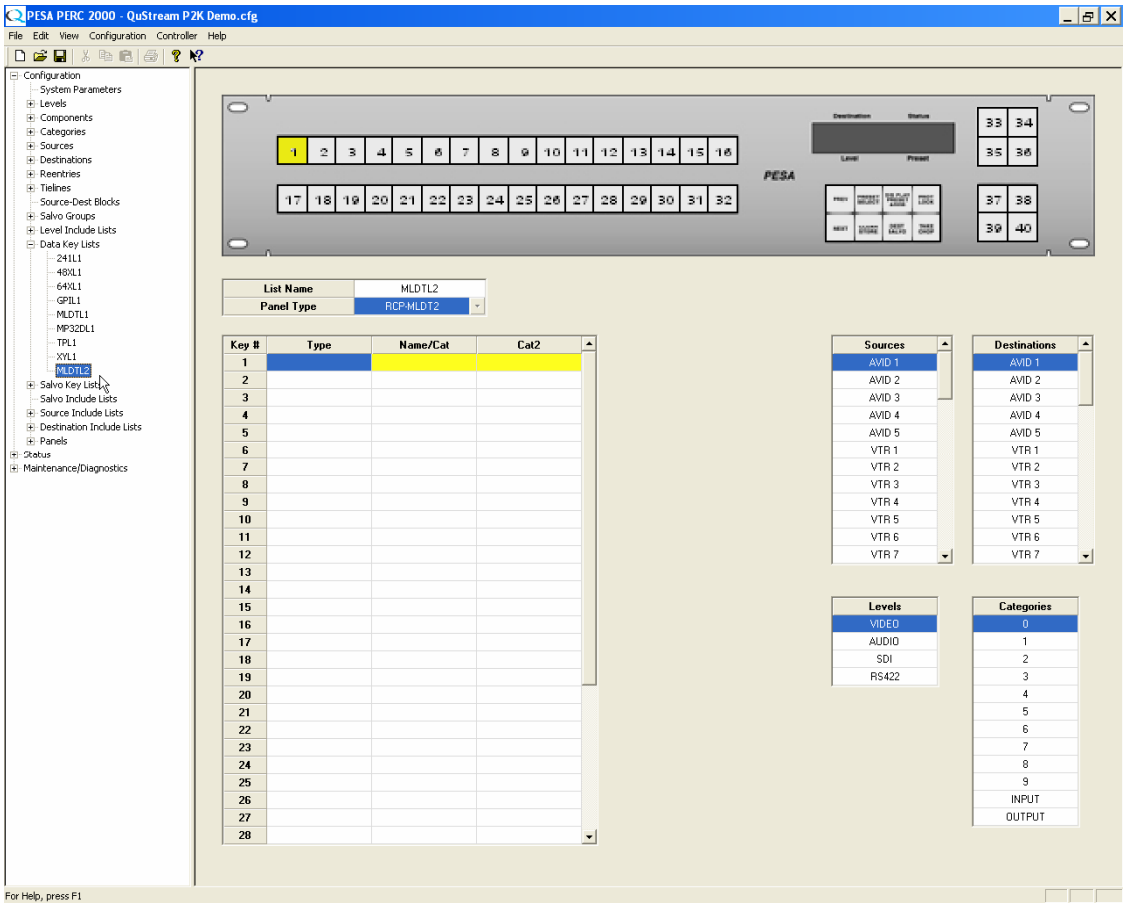


Figure 1-42

Once a name has been assigned to the list, click the cursor in the Panel Type field. A pull-down box appears listing the PESA remote control panels by model number. Locate the model number of the panel you are programming and click on the entry. The model number is placed in the field and a graphic image of the panel appears at the top of the screen, Figure 1-42.

1.6.12.2 Assigning Data Functions to Configurable Panel Keys

Below the fields you just entered you will see a list field with a column labeled Key # on the left-hand side. The numbers in the key # column correspond to the number assigned to each key of the panel as depicted by the on-screen graphic.

On the right-hand side of the screen you will see four scroll lists for Sources, Destinations, Levels and Categories. You can assign any key on the panel any item in any of the four lists. Once a control panel key is assigned, when the operator presses that key its label or function is recalled.

For example, refer to Figure 1-43 and you will see two rows of sixteen keys each (labeled 1 – 16 and 17 -32) on the left side of the panel and two groups of four numbered keys (labeled 33 – 36 and 37 – 40) on the right side. Assume you would like to program the top row to select sources, the bottom row to select destinations and the top cluster of four buttons to each select one of the four levels in the system.

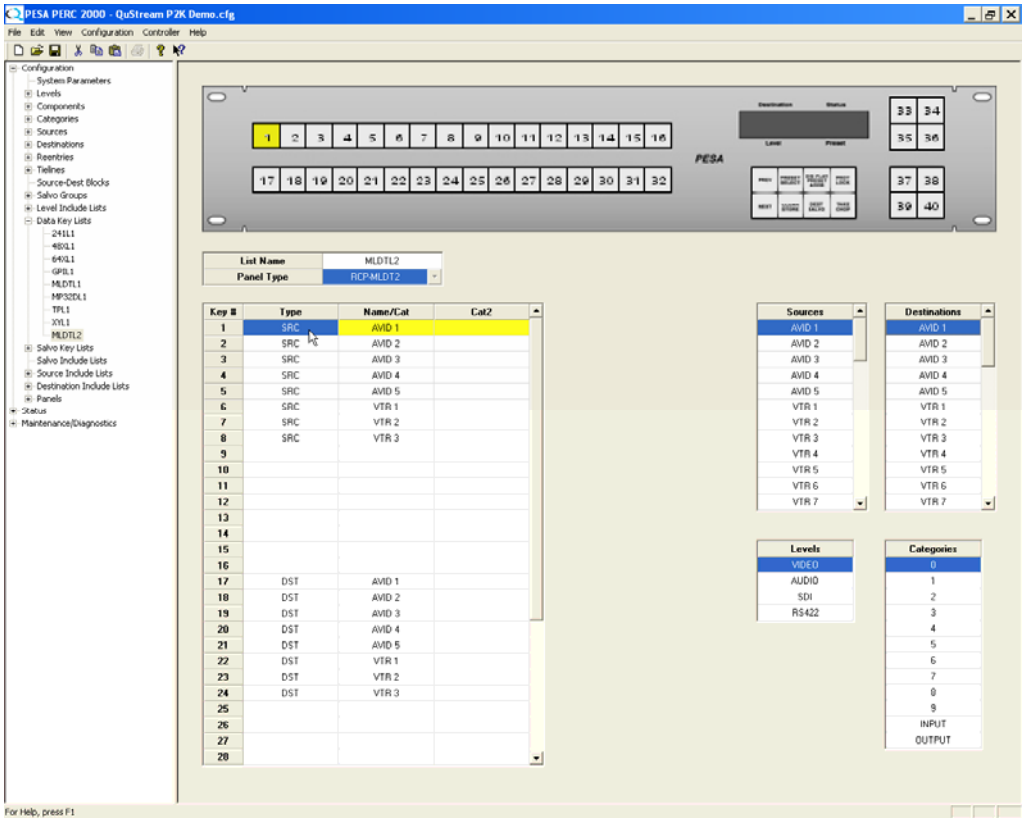


Figure 1-43

Move the cursor to the column labeled Type on the row for Key #1. You can do this either by clicking in the cell or by mouse clicking on button number 1 on the graphic image.

Locate the Source you wish to assign to button number 1 in the sources listing and double click. Refer to Figure 1-43 and note the Type (SRC for source) and the Name (AVID 1) are automatically entered. The cursor will advance to the row for Key # 2. Continue locating and clicking sources until the upper keys are assigned as desired.

Since our example is to program the bottom row as destinations, move the cursor to the cell under the Type heading for key number 17. Using the destination names listed in the Destinations scroll box, locate and double click on the destinations you wish to assign to the panel keys. In our example, we have assigned the first eight keys to the first eight destinations in the scroll box.

Let's further assume we would like to assign the top cluster of four buttons on the right side to each represent one of the four switching levels defined for this system. Just as in the above steps, move the cursor to the key you wish to assign to the VIDEO layer, for this text we will use key number 33. Locate the Levels scroll box and double click the level name VIDEO. The Type is identified as LEV and VIDEO is placed in the Name cell. Whenever you wish to access the VIDEO level on a panel operating under this data key list, press key 33.

Categories and their use and purpose are discussed in other areas of this manual. If you wish to assign a key on the panel to represent a specific category label, move the cursor to the Name/Cat cell of the key row to assign and then locate and double click the desired category label from the Categories scroll box. The column labeled Cat2 is used only when assigning a category label to a specific key. The entry in this column assigns the category label accessed when the panel key is selected after first selecting a Category Key.

Expanding the tree under the Data Key Lists parent header in the command tree window opens a listing of named data key lists. If you wish to access the configuration screen for a specific data key list, click on the name in the column listing. If you wish to add a data key list right mouse click on the Data Key Lists parent header in the command tree window to access a blank configuration screen.

1.6.13 SALVO KEY LISTS CONFIGURATION SCREEN

The Salvo Key Lists Configuration Screen, Figure 1-44, allows the user to generate one or more named lists which assign salvo groups to each configurable key on a remote control panel. Multiple panels may share a salvo key list as long as they are the same type of panel. Different panel types may not use the same salvo key list. Clicking on the Salvo Key Lists parent entry in the Command Screen Window brings up a clean copy of the configuration screen. It is from this screen that you program the keys on the various remote control panels in a system. Let's take a look at the elements you will find here.

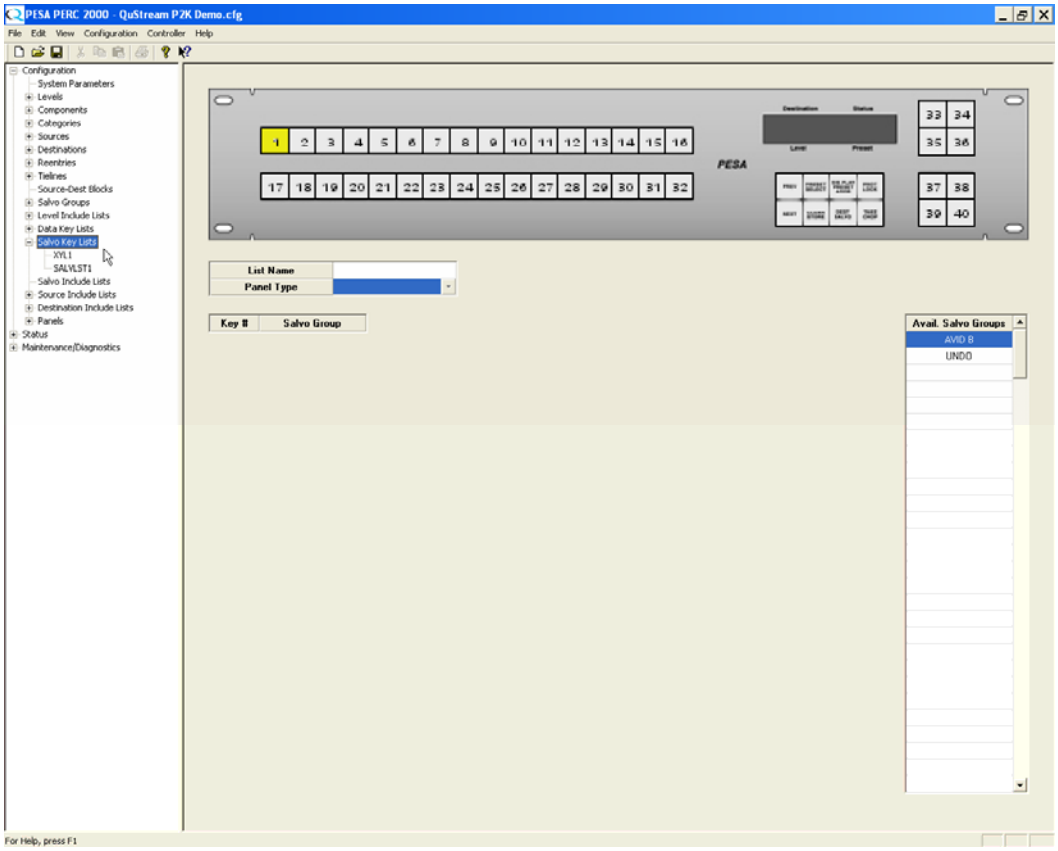


Figure 1-44 Salvo Key Lists Configuration Screen

To make the programming task more straightforward, a visual image of the type of remote control panel you are programming is displayed at the top of the configuration screen once the panel type is entered. There are a number of different remote control panels in the QuStream product line – each is designed for a specific purpose – and each panel has a different key and display layout. Displaying a graphic image provides an easy guide for the user to follow when configuring a specific type of panel. Before a panel type is assigned, the graphic display defaults to a random graphic.

1.6.13.1 Defining List Name and Panel Type

Note the fields labeled List Name and Panel Type, Figure 1-45. Enter a name for the salvo key list (up to 8 characters of letters and numbers). PESA recommends you assign a name that is somewhat descriptive of the function of the salvo key list or the type of panel it controls. Salvo Key List names may be from one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter.

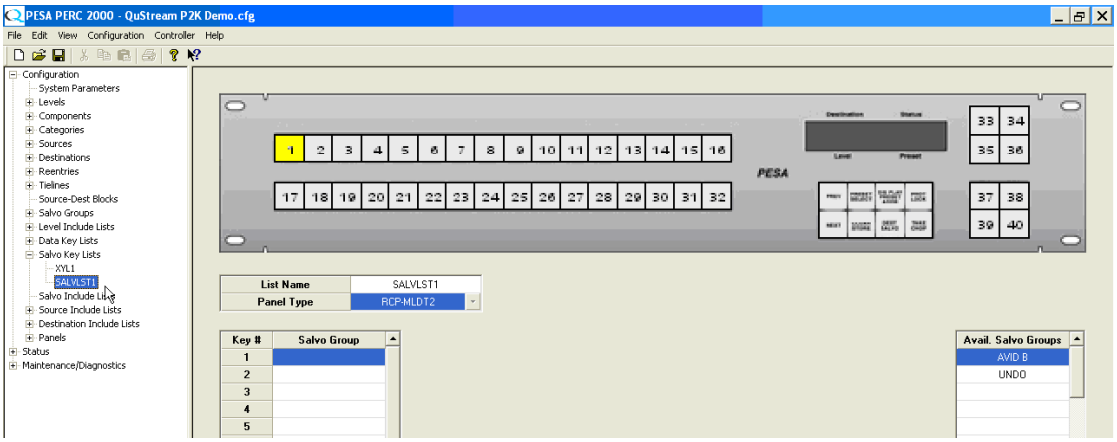


Figure 1-45 Salvo Key Lists Data Entry Fields

Once a name has been assigned to the list, click the cursor in the Panel Type field. A pull-down box appears listing the PESA remote control panels by model number. Locate the model number of the panel you are programming and click on the entry. The model number is placed in the field and a graphic image of the panel appears at the top of the screen, Figure 1-45.

1.6.13.2 Assigning Salvo Groups to Configurable Panel Keys

Below the fields you just entered you will see a list field with a column labeled Key # on the left-hand side. The numbers in the key # column correspond to the number assigned to each key of the panel as depicted by the on-screen graphic.

On the right-hand side of the screen you will see a scroll list for Available Salvo Groups. You can assign any key on the panel any item in the list. Once a control panel key is assigned, whenever the remote control panel is operating in salvo mode a specific salvo group is recalled when the operator presses the key associated with that salvo group.

For example, Figure 1-46 depicts the same panel we used to program the data key list in the previous paragraph. In addition to keys 1 thru 36 that we programmed previously, you will see a second group of four numbered keys (labeled 37 – 40) on the right side. Assume you would like to program these buttons to select salvo groups, more specifically we will associate button number 37 with salvo group AVID B and button 38 with the UNDO salvo function.

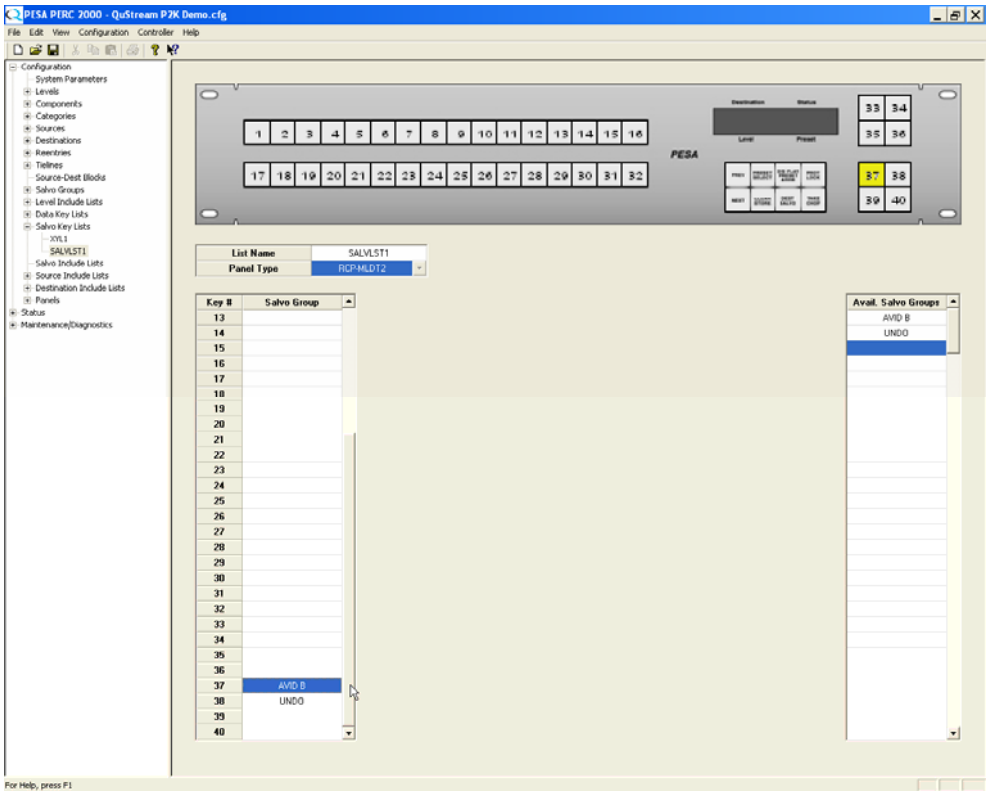


Figure 1-46 Salvo Key Lists Data Key Programming Example

Move the cursor to the column labeled Type on the row for Key #37. You can do this either by clicking in the cell or by mouse clicking button number 37 on the graphic image.

Locate the Salvo Group you wish to assign to button number 37 in the available salvo groups listing and double click. The cursor will advance to the row for Key # 38. Continue locating and clicking salvo groups until the panel keys are assigned as desired. For our example we double click on the UNDO label in the group listing to associate that function with button 38.

In order to access a salvo group name the remote control panel must be operating in the salvo mode. This is done in different ways for different panels and the user should consult the technical manual for the specific panel being used. In our example panel the user presses and holds the key labeled DESTN/SALVO until the lamp in the key starts to flash. In this mode when the user presses a key assigned a salvo group that group name will appear on the panel display ready to be activated.

Expanding the tree under the Salvo Key Lists parent header in the command tree window opens a listing of named salvo key lists. If you wish to access the configuration screen for a specific salvo key list, click on the name in the column listing. If you wish to add a salvo key list, right mouse click on the Salvo Key Lists parent header in the command tree window to access a blank configuration screen.

1.6.14 SALVO INCLUDE LISTS CONFIGURATION SCREEN

The Salvo Include Lists Configuration Screen, Figure 1-47, allows the user to selectively build a named list of salvo groups which, when assigned to a specific remote control panel, designates the salvo groups that panel is authorized to control. Multiple panels may share a Salvo Include List. Clicking on the Salvo Include Lists parent entry in the Command Screen Window brings up a clean copy of the working screen. Note that the screen has three areas:

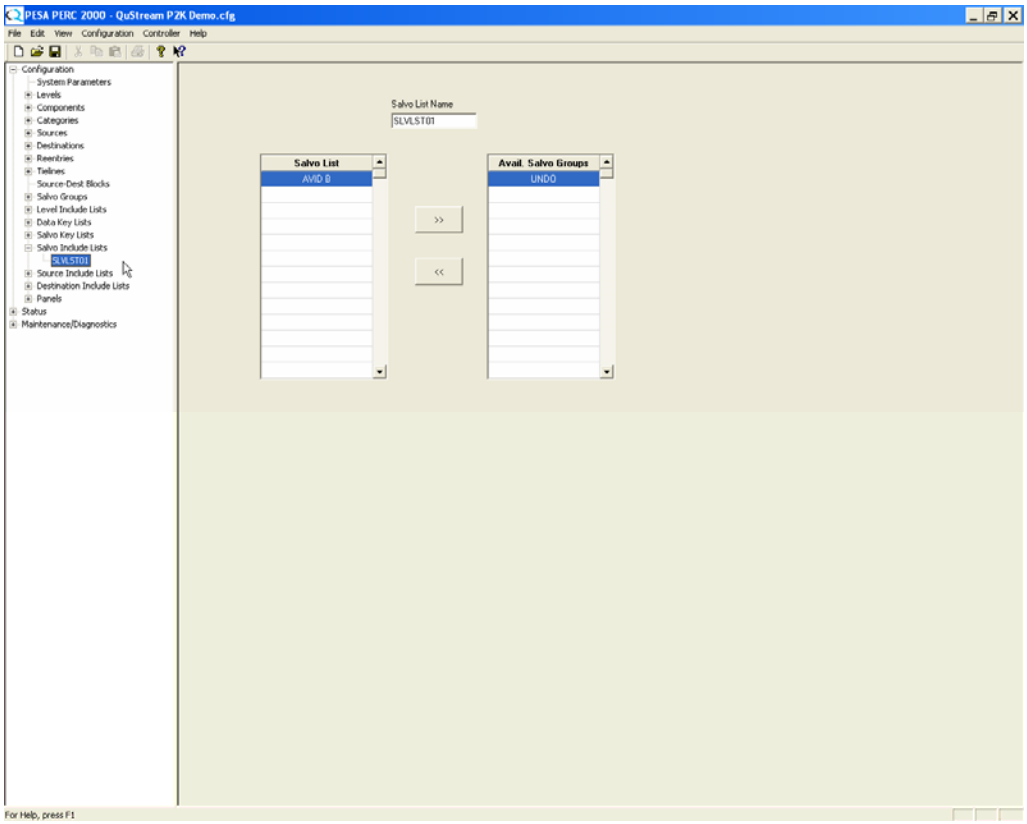


Figure 1-47 Salvo Include Lists Configuration Screen

Salvo List Name – This field is where you assign a name to the Salvo Include List. Names can be any combination of letters and numbers up to eight characters. QuStream highly recommends that you choose a name which is somewhat descriptive of the function of the salvo include list. Salvo List names may be from one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter.

Salvo List – Salvo groups listed in this column are accessible by remote control panels functioning under the named salvo include list.

Available Salvo Groups – This column contains a listing of all salvo groups which may be included in the salvo include list.

Initially, all salvo groups are listed in the Available Salvo Groups list box. Listed salvo groups are moved between the two list boxes using the two arrows between the boxes. In order to move a salvo group name from the available list to the salvo include list, highlight the salvo group you want to include in the list and click the arrow pointing from the available list to the include list. In order to disallow a salvo group from the include list, highlight and move the salvo group name from the include list to the available list using the arrow pointing to the available list.

Expanding the tree under the Salvo Include Lists parent header in the command tree window opens a listing of named salvo include lists. If you wish to access the configuration screen for a specific salvo include list, click on the name in the column listing. If you wish to access a blank Salvo Include Lists configuration screen, click on the Salvo Include Lists parent header in the command tree window.

1.6.15 SOURCE INCLUDE LISTS CONFIGURATION SCREEN

The Source Include Lists Configuration Screen, Figure 1-48, allows the user to selectively build a named list of sources which, when assigned to a specific remote control panel, designates the sources that panel is authorized to control. Multiple panels may share a Source Include List. Clicking on the Source Include Lists parent entry in the Command Screen Window brings up a clean copy of the working screen. Note that the screen has three areas:

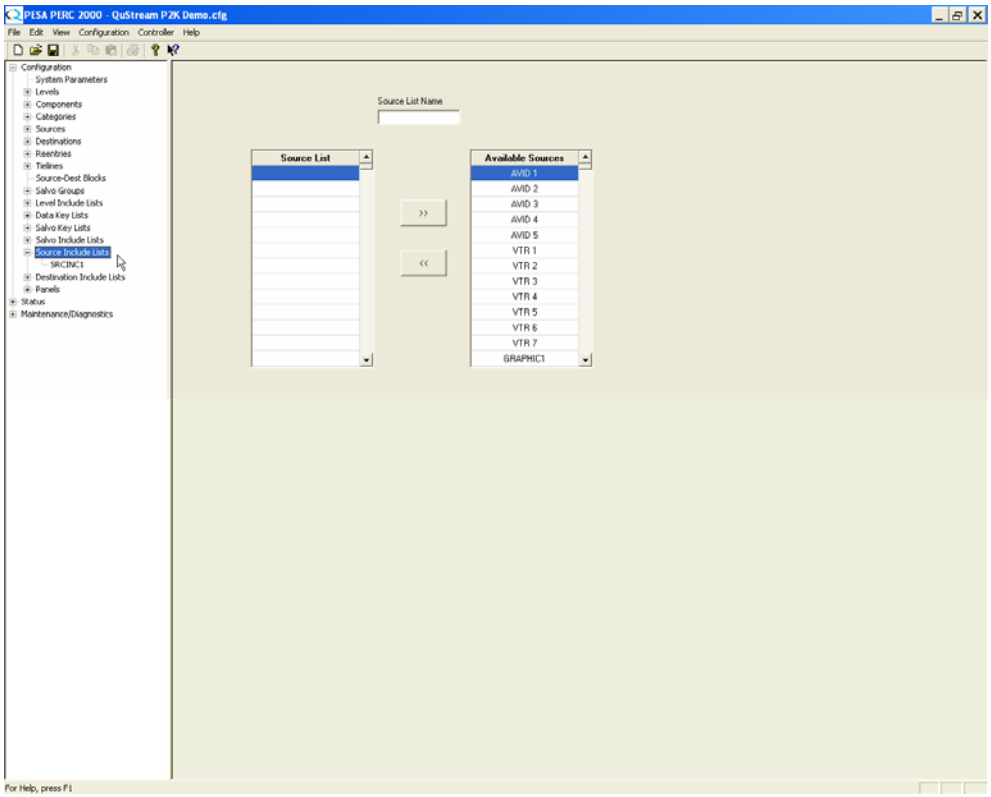


Figure 1-48 Source Include Lists Configuration Screen

Source List Name – This field is where you assign a name to the Source Include List. Names can be any combination of letters and numbers up to eight characters. QuStream highly recommends that you choose a name which is somewhat descriptive of the function of the source include list. Source List names may be from one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter.

Source List – Sources listed in this column are accessible by remote control panels functioning under the named source include list.

Available Sources – This column contains a listing of all sources which may be included in the source include list.

Initially, all sources are listed in the Available Sources list box. Listed sources are moved between the two list boxes using the two arrows between the boxes, Figure 1-49. In order to move a source name from the available list to the source include list, highlight the source you want to include in the list and click the arrow pointing from the available list to the include list. In order to disallow a source from the include list, highlight and move the source name from the include list to the available list using the arrow pointing to the available list.

Expanding the tree under the Source Include Lists parent header in the command tree window opens a listing of named source include lists. If you wish to access the configuration screen for a specific source include list, click on the name in the column listing. If you wish to access a blank Source Include Lists configuration screen, click on the Source Include Lists parent header in the command tree window.

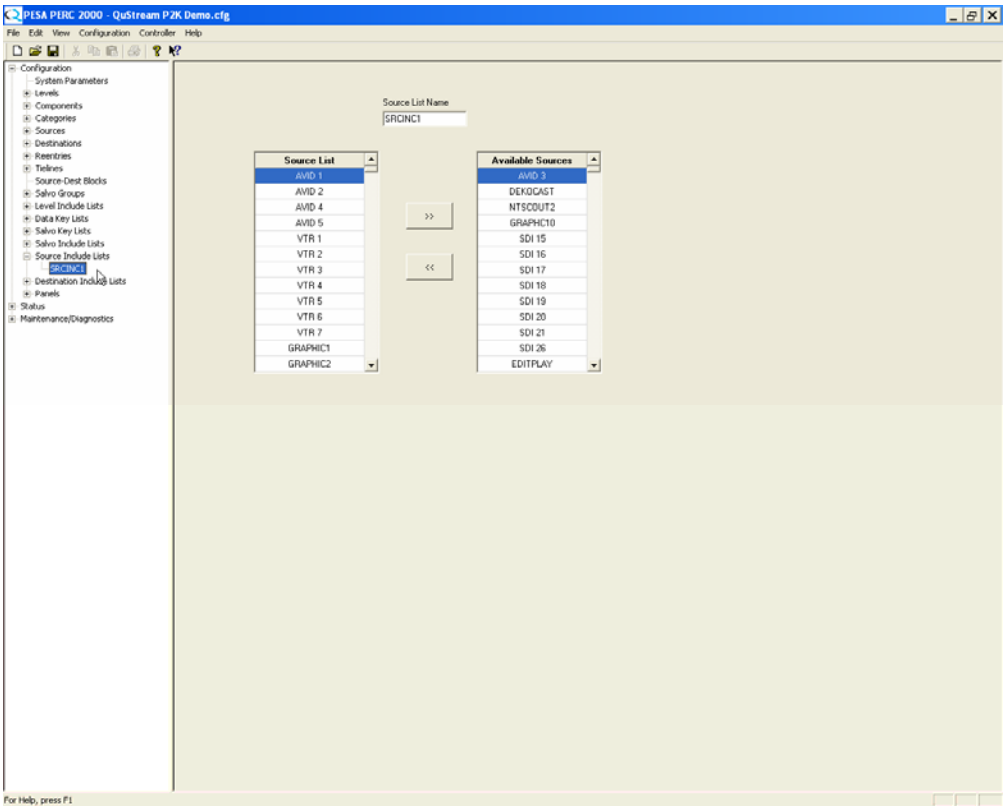


Figure 1-49 Source Include Lists Data Entry Fields

1.6.16 DESTINATION INCLUDE LISTS CONFIGURATION SCREEN

The Destination Include Lists Configuration Screen, Figure 1-50, allows the user to selectively build a named list of destinations which, when assigned to a specific remote control panel, designates the destinations that panel is authorized to control. Multiple panels may share a Destination Include List. Clicking on the Destination Include Lists parent entry in the Command Screen Window brings up a clean copy of the working screen. Note that the screen has three areas:

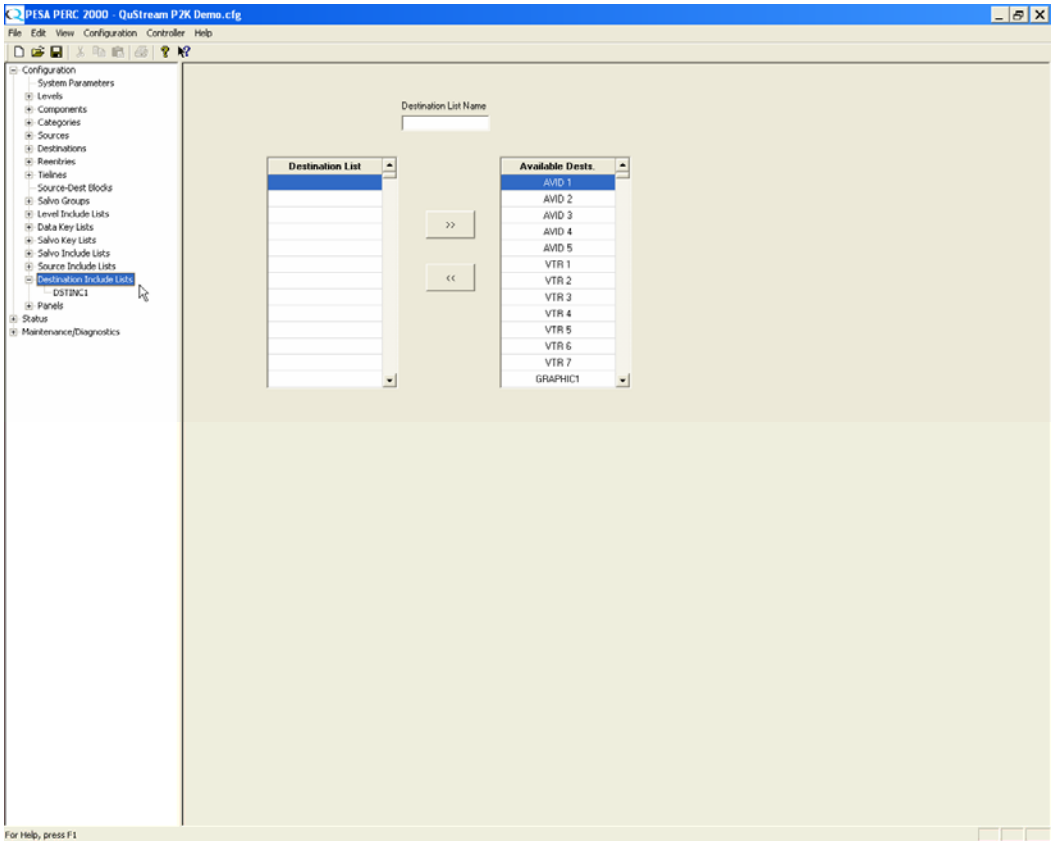


Figure 1-50 Destination Include Lists Configuration Screen

Destination List Name – This field is where you assign a name to the Destination Include List. Names can be any combination of letters and numbers up to eight characters. QuStream highly recommends that you choose a name which is somewhat descriptive of the function of the destination include list. Destination List names may be from one to eight characters in length and are constructed using uppercase letters, numbers, and spaces. The first character must be a letter.

Destination List – Destinations listed in this column are accessible by remote control panels functioning under the named destination include list.

Available Sources – This column contains a listing of all destinations which may be included in the destination include list.

Initially, all destinations are listed in the Available Destinations list box. Listed destinations are moved between the two list boxes using the two arrows between the boxes, Figure 1-51. In order to move a destination name from the available list to the destination include list, highlight the destination you want to include in the list and click the arrow pointing from the available list to the include list. In order to disallow a destination from the include list, highlight and

move the destination name from the include list to the available list using the arrow pointing to the available list.

Expanding the tree under the Destinations Include Lists parent header in the command tree window opens a listing of named destination include lists. If you wish to access the configuration screen for a specific destination include list, click on the name in the column listing. If you wish to access a blank Destination Include Lists configuration screen, click on the Destination Include Lists parent header in the command tree window.

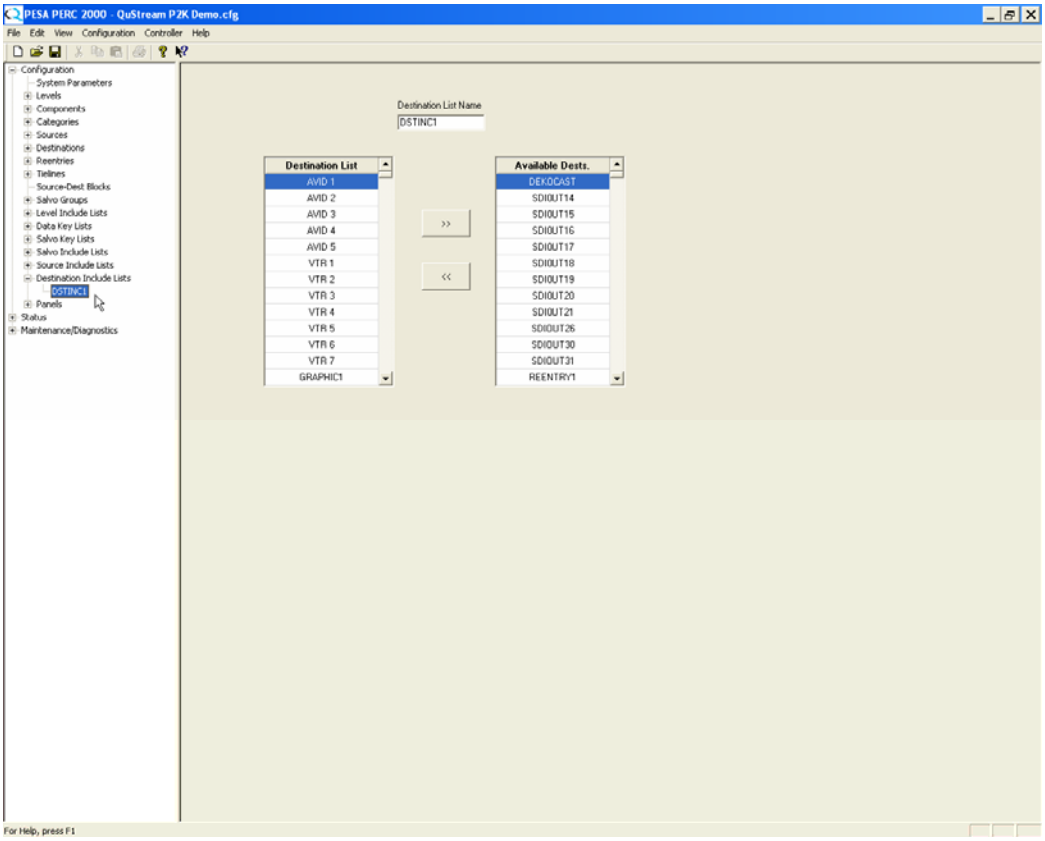


Figure 1-51 Destination Include Lists Data Entry Fields

1.6.17 PANELS CONFIGURATION SCREEN

The Panels Configuration Screen, Figure 1-52, allows the user to add remote control panels to the system, program the functionality of each panel, and review the configuration of existing panels. There are several different types of panels in the QuStream product family and each panel has a different control and display set. For this reason, text in this manual does not deal with operational procedures or displays of any specific panel type. The user is encouraged to consult the panel technical manual for specific information.

Using the P2K System Controller, remote control panels may be connected to the controller hardware using either the Remote Control Panel (RCP) bus – a PESA proprietary serial bus

protocol – or, for panels so equipped, a standard Ethernet network communicating over a facility LAN. When using the PRC bus all remote control panels must be assigned a unique panel address. This is done by setting a DIP Switch on the rear of each remote control panel. When communicating with control panels over an Ethernet link, each panel must be assigned a unique IP address.

Clicking on the Panels parent entry in the Command Screen Window brings up the panels configuration screen.

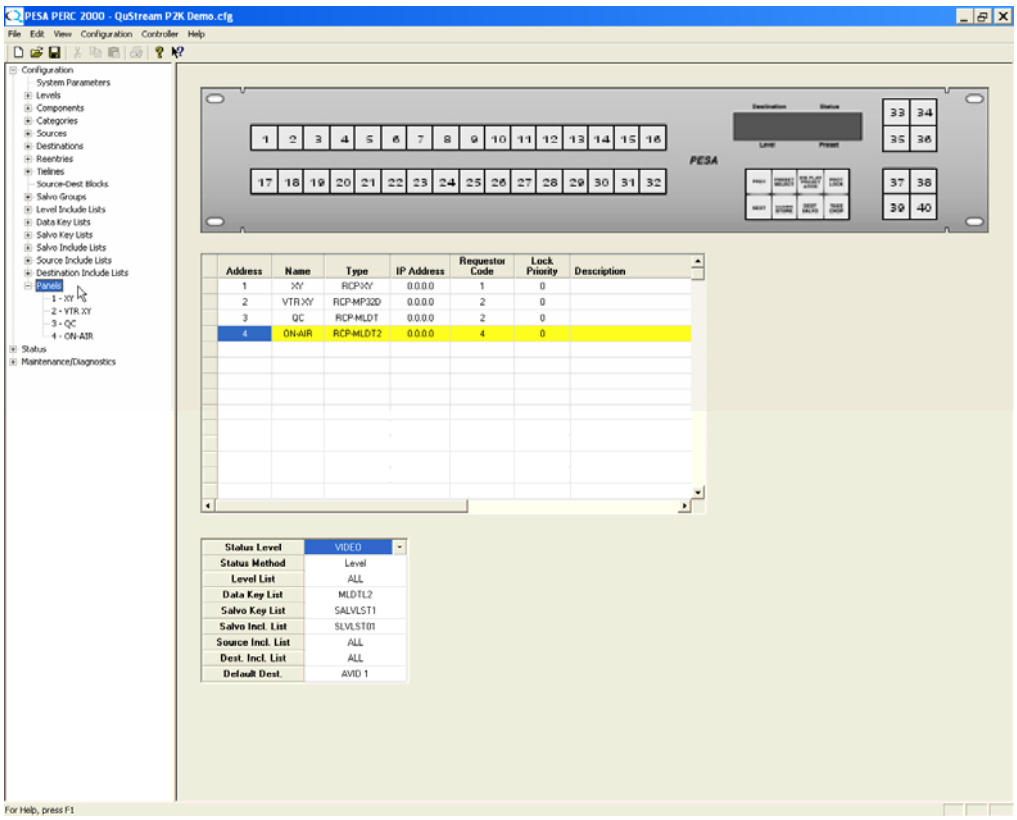


Figure 1-52 Panels Configuration Screen

In the middle of this screen you will see a spreadsheet format table, Figure 1-52, with an entry for each remote control panel in the system. If you are starting a new configuration file, this screen will not have any entries until you add panel data. When viewing an existing configuration file, data for the currently configured panels is displayed.

Anytime a panel entry in the listing window is highlighted, a graphic image of the remote control panel is displayed at the top of the configuration screen. If you are adding a new panel to the listing, the graphic image of the panel is displayed once the panel type parameter is selected. Displaying a graphic image allows the user to verify the panel type as well as provide a visual cue of the features and functions of the specific panel.

In order to add a remote control panel to the system, right click the Panels parent entry in the Command Screen Window and select the Add Panel option, Figure 1-53, from the pop-up box. A new row is highlighted for entering configuration data of the panel. The order of data entry is not particularly critical, but be aware that the graphic image will not update to the new panel until the panel type is entered in the Type column. Figure 1-54 offers a closer look at the configuration table. Table entries are discussed in the following paragraphs:

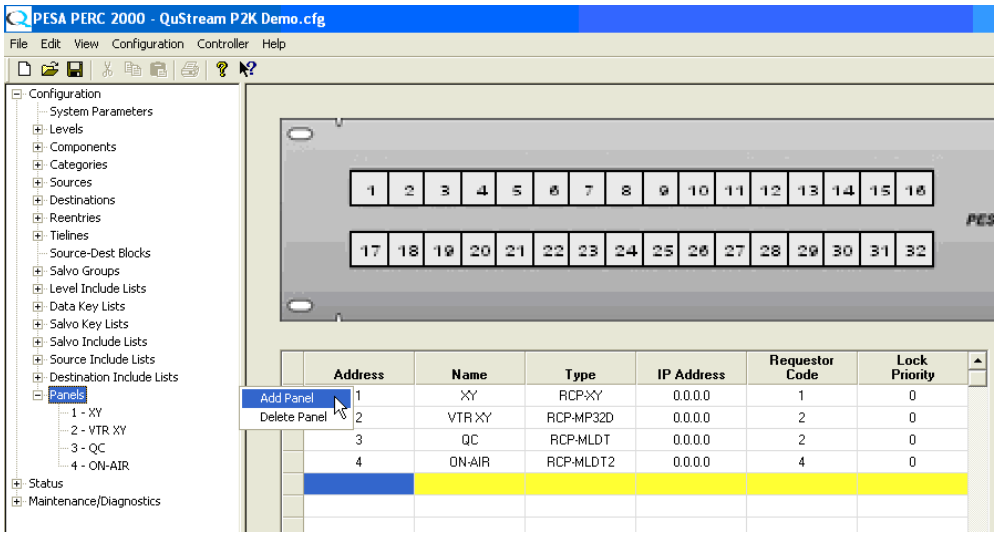


Figure 1-53 Adding A Panel Configuration

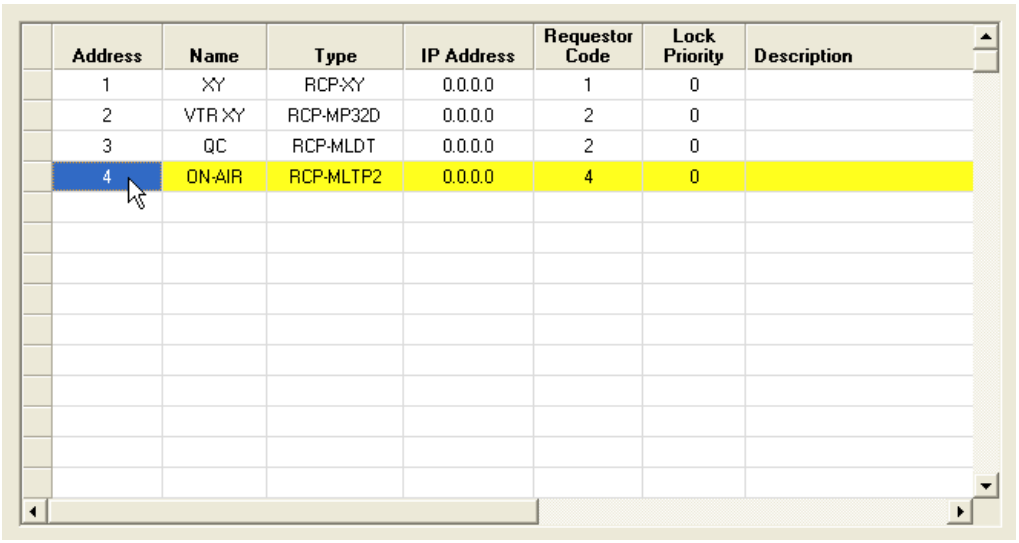


Figure 1-54 Panels Configuration Data Entry Fields

Enter Panel Configuration Data

Address – Enter the address number assigned to the panel in the Address column. This is a unique number assigned to each remote control panel in the system as set by a DIP Switch on the rear of each remote control panel.

Name – This entry allows the user to assign a name to each remote control panel. A panel name may be up to 8 characters in length and consist of a mix of alphanumeric characters. This is the text string displayed in other configuration and status screens to identify the panel.

Type – This column allows the user to select the panel type using a pull-down menu of all PESA control panel model numbers. Click in the Type cell and open the pull-down menu. Select the model number of the panel you are installing and click the entry. The model number appears in the cell and a graphic image of the panel is displayed on the configuration screen.

IP Address – If the panel you are installing communicates with the P2K Controller over an Ethernet LAN connection, enter the IP Address of the panel in the IP Address column. Each panel must be assigned a unique IP address and also a unique panel identifier address. If the panel you are adding is not an Ethernet panel and uses the daisy-chain RCP control bus, the IP address 0.0.0.0 will be entered in this column.

Requestor Code –

Lock Priority –

Description –The Description column is a free text field where you can enter a description of the panel and its function or any other data you wish to enter concerning this panel.

Once the panel information is entered, enter the specific operational parameters for the panel in the box located beneath the panel, Figure 1-55. Each cell in this table uses a pull-down menu to display the options available. In order to enter or change any selection in the configuration, click in the cell containing the parameter you want to change and click on the pull-down arrow. From the pull-down menu, click on the selection you want to enter for the panel configuration. Note that not all fields shown in Figure 1-55 are pertinent to all panel types. If a panel does not support certain functions, the fields pertaining to that function will not be displayed. This table contains the following entries:

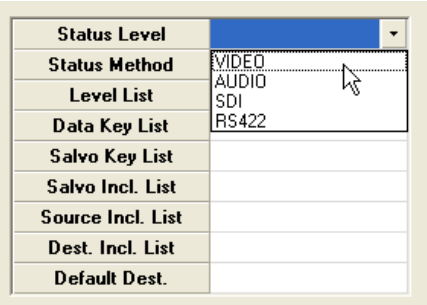


Figure 1-55 Panel Operational Parameters

Status Level – Status Level is the default switching level displayed or controlled by the panel. To assign or edit the Status Level click in the cell and change the level selection from the pull-down menu.

Status Method –

Level List – This entry determines the switching levels authorized for the panel by assigning a Level Include List to the panel. If the panel is authorized for all switching levels, select ALL from the pull-down menu.

Data Key List – This entry determines the function of the configurable panel keys by assigning a Data Key List to the panel. The desired data key list is chosen from the pull-down menu associated with the cell. Only data key lists which are valid for the panel type are included in the pull-down menu.

Salvo Key List – This entry maps salvo group functions to configurable panel keys by assigning a Salvo Key List to the panel. The desired salvo key list is chosen from the pull-down menu associated with the cell. Only salvo key lists that are valid for the panel type are included in the pull-down menu. If there is no valid salvo key list for the panel type, the Salvo Key List row will not appear in the table listing.

Salvo Include List – This entry determines the salvo groups authorized for access by the panel by assigning a Salvo Include List to the panel. The desired salvo include list is chosen from the pull-down menu associated with the cell. If the panel is authorized access to all salvo groups, select ALL from the pull-down menu.

Source Include List - This entry determines the sources authorized for access by the panel by assigning a Source Include List to the panel. The desired source include list is chosen from the pull-down menu associated with the cell. If the panel is authorized access to all sources, select ALL from the pull-down menu.

Destination Include List - This entry determines the destinations authorized for access by the panel by assigning a Destination Include List to the panel. The desired destination include list is chosen from the pull-down menu associated with the cell. If the panel is authorized access to all destinations, select ALL from the pull-down menu.

Default Destination – This entry assigns the default destination to the panel. In operation, the default destination determines which destination is displayed and controlled on initial panel power-up.

Expanding the tree under the Panels parent header in the command tree window opens a listing of named remote control panels, Figure 1-56. If you wish to access the configuration screen for a specific panel, click on the name in the column listing. If you wish to add a panel configuration, right mouse click on the Panels parent header in the command tree window to access a blank configuration screen. To delete a panel configuration, click the panel name in the panel list, right click and select Delete Panel. You will NOT be asked to verify your choice to delete a panel – the action is immediate. Be absolutely sure you want to delete the panel configuration before you click on the delete command.

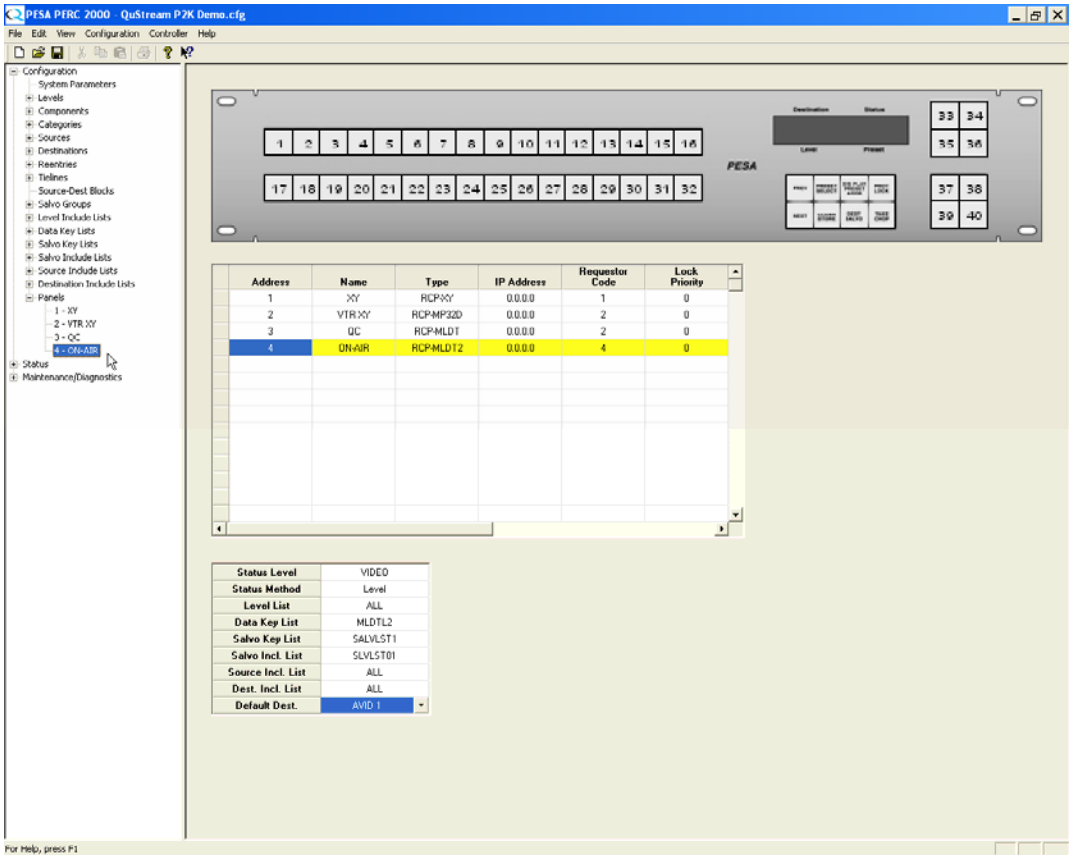


Figure 1-56 Assigned Panel Listing

1.7 STATUS COMMANDS

Commands and screens contained in the Status tree header allow real-time status monitoring of the router system. Certain of these screens also allow the user to perform on the fly switches directly from the status screen. Since all of the Status functions are polled in real-time, the software application must have an active (on-line) connection to the P2K Controller.

Anytime a user requests a command or screen under the Status header and an active connection to the controller is not established, a pop-up box displays prompting the user to select the controller card desired for monitoring. Double click the entry in the box to activate the connection to the card. If desired, the user may also connect to a controller card using commands contained under the Controller heading on the menu bar. Click on Controller and select the Connect option. The pop-up box appears as above.

When all status monitoring functions are completed and you wish to disconnect the software application from the controller hardware, click on the Controller heading on the menu bar and select the Disconnect option from the command list.

Figure 1-57 lists the command headers contained under the Status parent header. Each command is discussed in the following paragraphs.

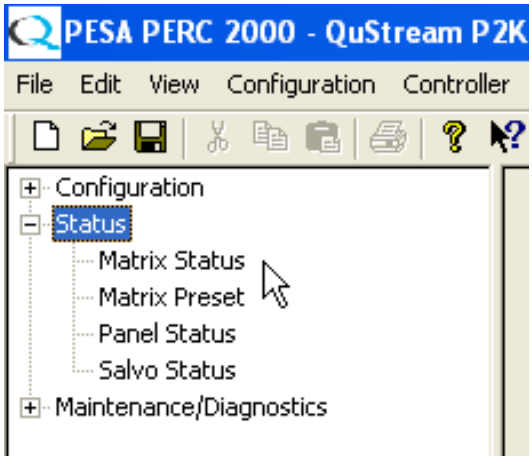


Figure 1-57

1.7.1 MATRIX STATUS

The Matrix Status screen, Figure 1-58, is the top-level default screen of the Status menu. From this screen the user can monitor the status of the entire switching matrix, presented in a spreadsheet format of rows and columns.

Columns of the spreadsheet list the assigned destinations by name, the lock or unlock status of each destination and the switching levels by name. For each listed destination the spreadsheet columns provide the following information:

Name – This column is a listing, by name, of every destination in the system as assigned by the Destinations Configuration Screen.

Lock – If a check mark appears in the box, the destination is locked. Destinations can be locked from system remote control panels or from this status screen.

Levels – There is a column for each switching level as assigned by the Levels Configuration Screen.

For each destination, the lock status is displayed and the source switched to it is identified by switching level(s). For example, looking at Figure 1-58, the destination named PROD-1 is currently in an unlocked status and the source named ARXB-87 is switched to PROD-1 on the A VIDEO level. A blank indicates no active switch for the indicated level.

A scroll box on the right-hand side of the screen contains a list of all sources by name as assigned by the Sources Configuration Screen. Three click buttons labeled Take, Lock and Unlock are located beneath the scroll box. Using the source list and the click buttons the user can make on the fly changes to the matrix configuration. Suppose that while monitoring the matrix status screen, you have a need to change the source of destination PROD-1 from ARXB-87 to ARXB-2 on the A VIDEO level:

Click the cursor in the cell on PROD-1 row under the A VIDEO column – the cell will highlight.

Locate ARXB-2 in the Sources scroll list and click in the cell – it will highlight.

The switch may be taken in one of two ways: you may double click on the source entry or click on the Take button. Once the switch is taken, the destination status cell for A VIDEO will reflect the new source selection.

Lock and Unlock buttons allow you to lock or unlock a destination. Move the cursor to the cell under the Lock column of the destination you wish to lock or unlock. If the destination is currently unlocked, clicking the lock button will lock it; if the destination is currently locked, clicking the unlock button will unlock it.

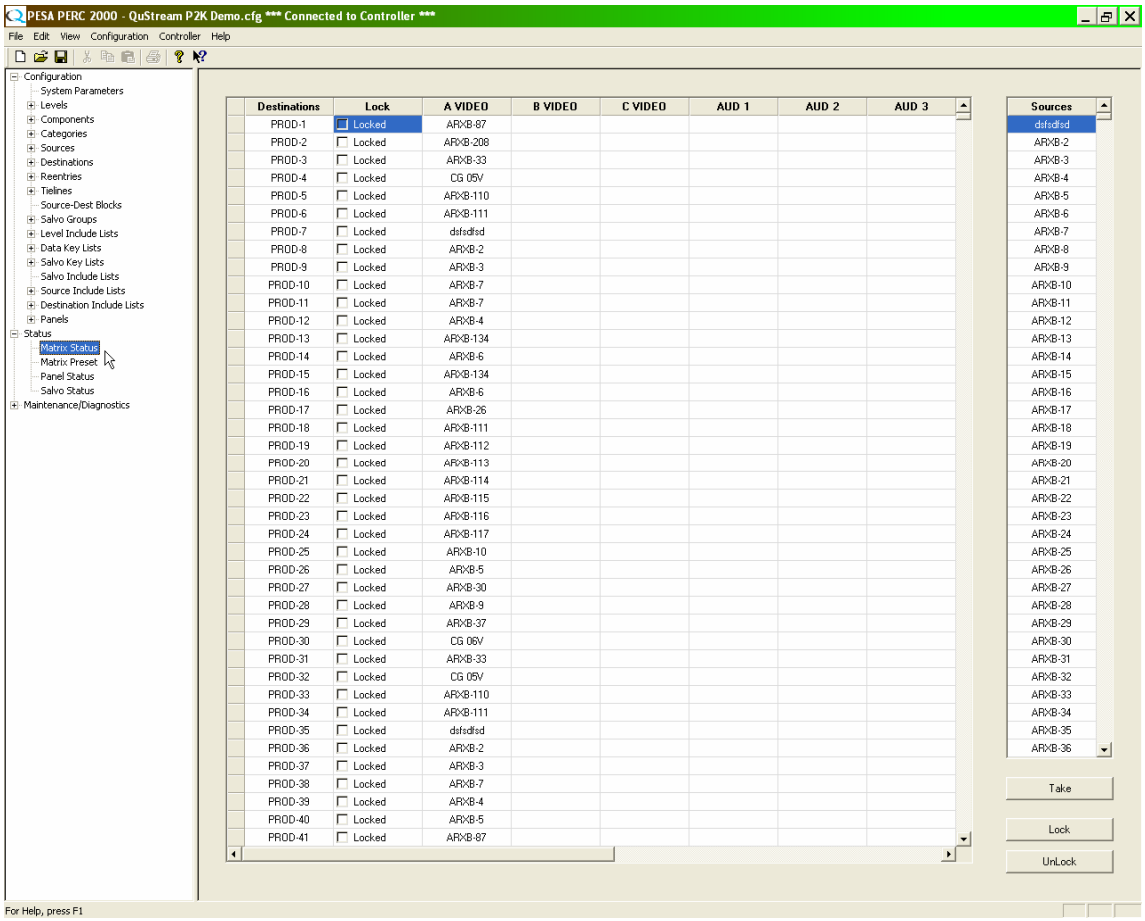
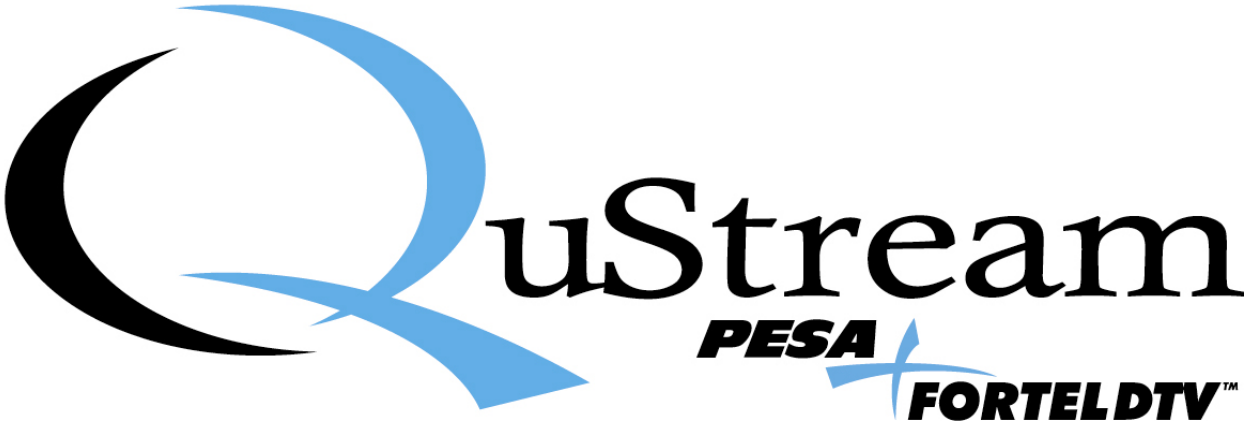


Figure 1-58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